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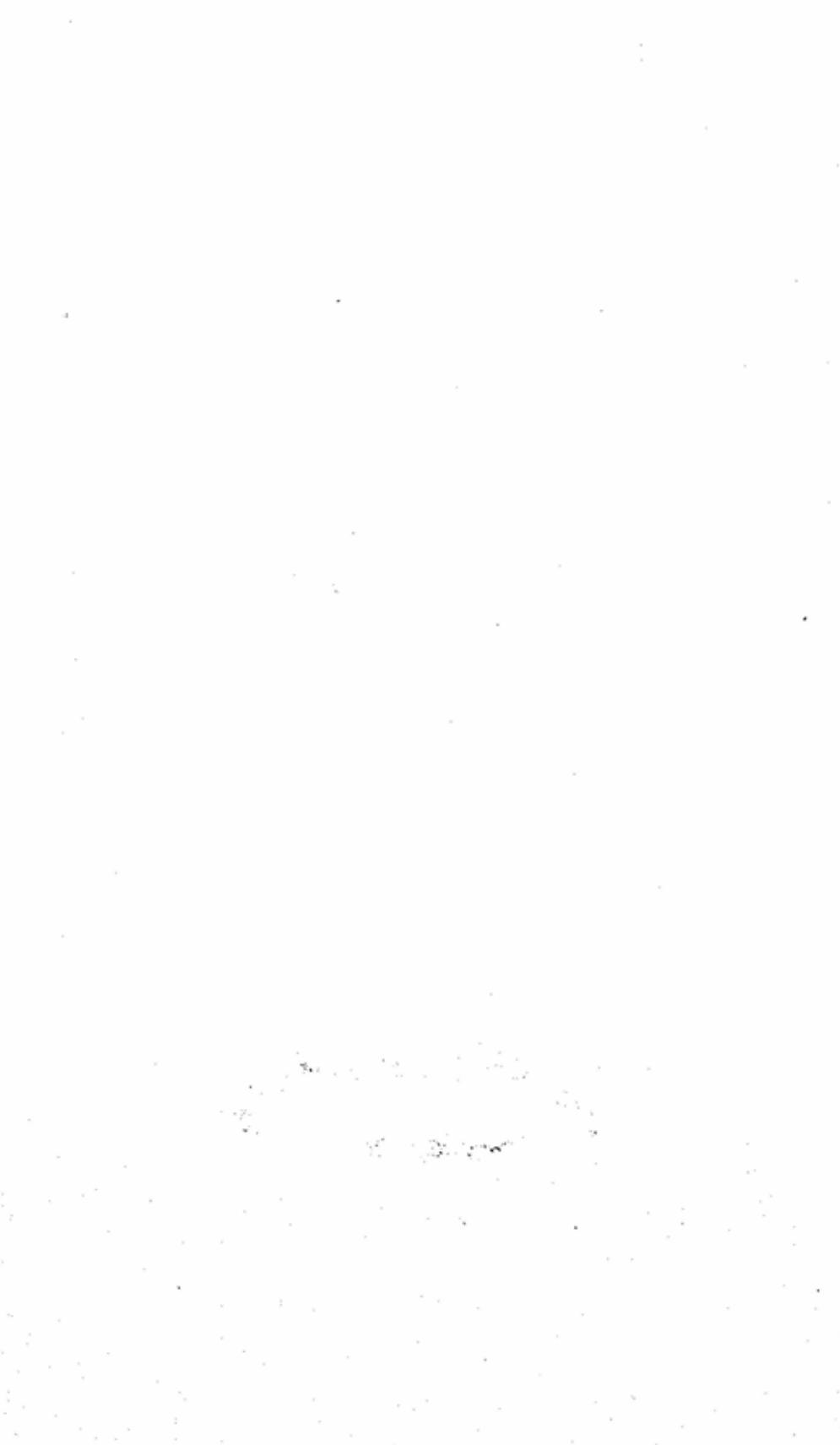
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SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM

REPORT ON THE PROGRESS AND CON-
DITION OF THE U. S. NATIONAL
MUSEUM FOR THE YEAR
ENDING JUNE 30, 1908

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UNITED STATES NATIONAL MUSEUM,
UNDER DIRECTION OF THE SMITHSONIAN INSTITUTION,
Washington, D. C., December 2, 1908.

SIR: I have the honor to submit herewith a report upon the present condition of the United States National Museum, and upon the work accomplished in its various departments during the fiscal year ending June 30, 1908.

Very respectfully,

RICHARD RATHBUN,
Assistant Secretary, in Charge of the National Museum.

Dr. CHARLES D. WALCOTT,
Secretary, Smithsonian Institution.

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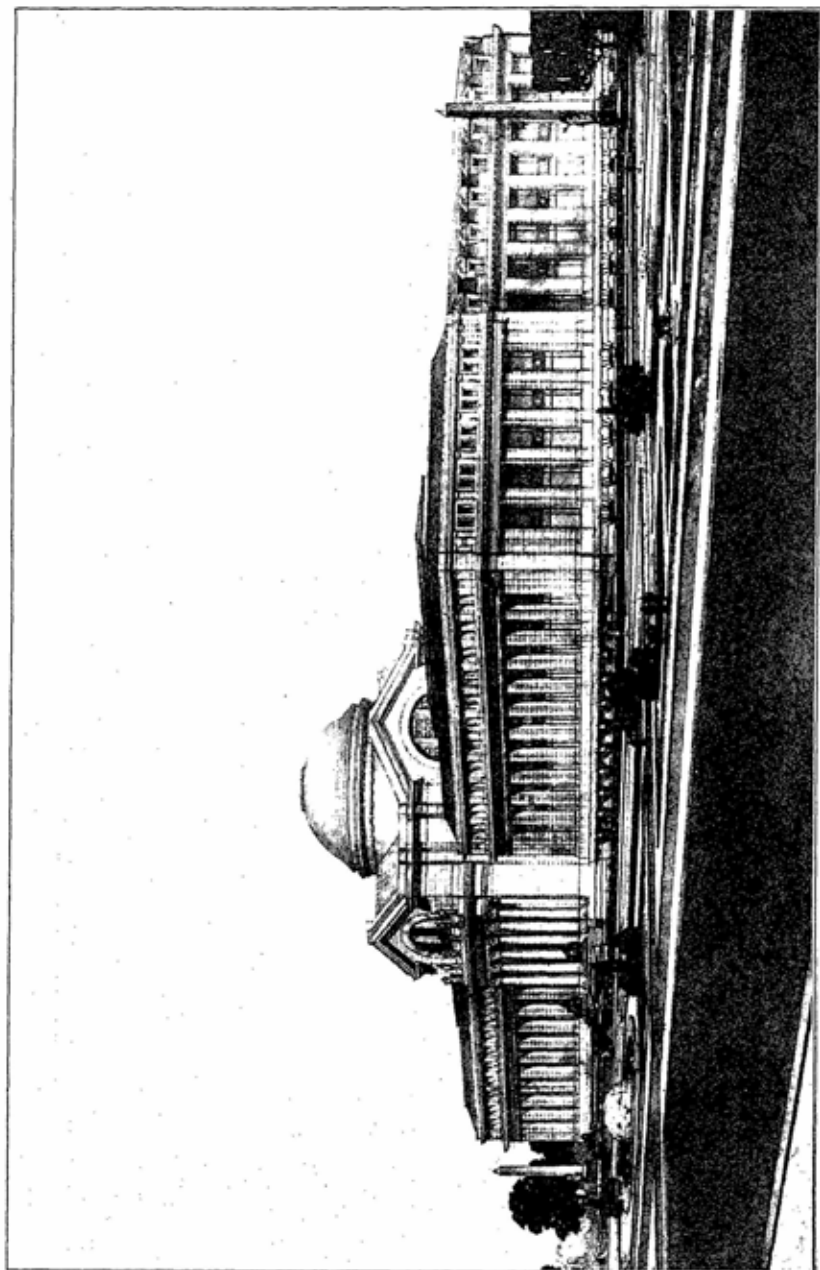
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NEW BUILDING FOR UNITED STATES NATIONAL MUSEUM.

Perspective view of the building as it will appear when finished; taken from the southeast, and showing the south or main front and the east side.
Hornblower & Marshall, architects. Reproduced from a water-color drawing by L. M. Lebeaume.

REPORT ON THE PROGRESS AND CONDITION OF THE U. S. NATIONAL MUSEUM FOR THE YEAR ENDING JUNE 30, 1908.

BY RICHARD RATHBUN,

Assistant Secretary of the Smithsonian Institution, in charge of the U. S. National Museum.

GENERAL CONSIDERATIONS.

INCEPTION AND HISTORY.

The inception and history of the National Museum have often been discussed in the opening pages of the annual report. Congress, in the act of August 10, 1846, founding the Smithsonian Institution, recognized that an opportunity was afforded, in carrying out the large-minded design of Smithson, to provide for the custody of the museum of the nation. To this new establishment was therefore intrusted the care of the national collections, a course that time has fully justified.

In the beginning the cost of maintaining the museum side of the Institution's work was wholly paid from the Smithsonian income; then for a number of years the Government bore a share, and during the past three decades Congress has voted sufficient funds to cover the expenses of the Museum, thus furthering one of the primary means "for the increase and diffusion of knowledge among men" without encroaching upon the resources of the Institution.

The museum idea was inherent in the establishment of the Smithsonian Institution, which in its turn was based upon a ten years' discussion in Congress and the advice of the most distinguished scientific men, educators, and intellectual leaders of the nation of seventy years ago. It is interesting to note how broad and comprehensive were the views which actuated our lawmakers in determining the

scope of the Museum, a fact especially remarkable when it is recalled that at that date no museum of considerable size existed in the United States, and the museums of England and of the Continent of Europe were still to a large extent without a developed plan, although containing many rich collections.

The Congress which passed the act of foundation enumerated as within the scope of the Museum "all objects of art and of foreign and curious research and all objects of natural history, plants, and geological and mineralogical specimens belonging to the United States," thus stamping the Museum at the very outset as one of the widest range and at the same time as the Museum of the United States. It was also fully appreciated that additions would be necessary to the collections then in existence, and provision was made for their increase by the exchange of duplicate specimens, by donations, and by other means.

If the wisdom of Congress in so fully providing for a museum in the Smithsonian law challenges attention, the interpretation put upon this law by the Board of Regents within less than six months from the passage of the act can not but command admiration. In the early part of September, 1846, the Regents took steps toward formulating a plan of operations. The report of the committee appointed for this purpose, submitted in December and January following, shows a thorough consideration of the subject in both the spirit and the letter of the law. It would seem not out of place to cite here the very first pronouncement of the Board with reference to the character of the Museum:

"In obedience to the requirements of the charter,^a which leaves little discretion in regard to the extent of accommodations to be provided, your committee recommend that there be included in the building a museum of liberal size, fitted up to receive the collections destined for the Institution. * * *

"As important as the cabinets of natural history by the charter required to be included in the Museum your committee regard its ethnological portion, including all collections that may supply items in the physical history of our species and illustrate the manners, customs, religions, and progressive advance of the various nations of the world; as, for example, collections of skulls, skeletons, portraits, dresses, implements, weapons, idols, antiquities, of the various races of man. * * * In this connexion your committee recommend the passage of resolutions asking the cooperation of certain

^a Since the Institution was not chartered in a legal sense, but established by Congress, the use of the word "charter" in this connection would seem to be unauthorized. It was not subsequently employed.

public functionaries and of the public generally in furtherance of the above objects.

"Your committee are further of opinion that in the Museum, if the funds of the Institution permit, might judiciously be included various series of models illustrating the progress of some of the most useful inventions; such, for example, as the steam engine from its earliest and rudest form to its present most improved state; but this they propose only so far as it may not encroach on ground already covered by the numerous models in the Patent Office.

"Specimens of staple materials, of their gradual manufacture, and of the finished products of manufactures and the arts may also, your committee think, be usefully introduced. This would supply opportunity to examine samples of the best manufactured articles our country affords, and to judge her gradual progress in arts and manufactures. * * *

"The gallery of art, your committee think, should include both paintings and sculpture, as well as engravings and architectural designs; and it is desirable to have in connexion with it one or more studios in which young artists might copy without interruption, being admitted under such regulations as the board may prescribe. Your committee also think that, as the collection of paintings and sculpture will probably accumulate slowly, the room destined for a gallery of art might properly and usefully meanwhile be occupied during the sessions of Congress as an exhibition room for the works of artists generally; and the extent and general usefulness of such an exhibition might probably be increased if an arrangement could be effected with the Academy of Design, the Arts-Union, the Artists' Fund Society, and other associations of similar character, so as to concentrate at the metropolis for a certain portion of each winter the best results of talent in the fine arts."

The important points in this report are, (1) that it was the opinion of the Regents that a museum was requisite under the law, Congress having left no discretion in the matter; (2) that ethnology and anthropology, though not specially named, were yet as important subjects as natural history; (3) that the history of the progress of useful inventions and the collection of the raw materials and products of the manufactures and arts should also be provided for; (4) for the gallery of art the committee had models in existence, and they proposed, pending the gathering of art collections, which would of necessity be slow, to provide for loan exhibitions by cooperating with art academies and societies.

In the resolutions which were adopted upon the presentation of this report, a museum was mentioned as "one of the principal modes

of executing the act and trust."^a The work was to go forward as the funds permitted, and, as is well known, the maintenance of the Museum and the library was long ago assumed by Congress, the Institution taking upon itself only so much of the necessary responsibility for the administration of these and subsequent additions to its activities as would weld them into a compact whole, which together form a unique and notable agency for the increase and diffusion of knowledge, for the direction of research, for cooperation with departments of the Government and with universities and scientific societies in America, and likewise afford a definite correspondent to all scientific institutions and men abroad who seek interchange of views or knowledge with men of science in the United States.

Since that early day no material change has been suggested in the general scope of the Government Museum; it has only remained to elaborate the details, and the opportunity is now close at hand to realize all that the first Board had in view, since ample space will be available within another two years.

The development of the Museum has naturally been greatest in those subjects which the conditions of the past sixty years have made most fruitful—the natural history, geology, ethnology,² and archeology of the United States, supplemented by many collections from other countries. The opportunities in these directions have been mainly brought about through the activities of the scientific and economic surveys of the Government, many of which are the direct outgrowths of earlier explorations, stimulated or directed by the Institution. The Centennial Exhibition of 1876 afforded the first opportunity for establishing a department of the industrial arts on a creditable basis, and of this the fullest advantage was taken, though only a part of the collections then obtained could be accommodated in the space available.

The department or gallery of the fine arts had made little progress, though not from lack of desire or appreciation, until within the past two and one-half years, during which its interests have been markedly advanced, as elsewhere explained.

Another subject to which much attention has been paid with gratifying results is American history, illustrated by objects representing

^a *Resolved*, That it is the intention of the act of Congress establishing the Institution, and in accordance with the design of Mr. Smithson, as expressed in his will, that one of the principal modes of executing the act and the trust is the accumulation of collections of specimens and objects of natural history and of elegant art, and the gradual formation of a library of valuable works pertaining to all departments of human knowledge, to the end that a copious storehouse of materials of science, literature, and art may be provided which shall excite and diffuse the love of learning among men, and shall assist the original investigations and efforts of those who may devote themselves to the pursuit of any branch of knowledge.

distinguished personages and important events as well as the domestic life of the country from the colonial period to the present day.

It has been deemed appropriate to present the foregoing brief review of the scope of the national collections in this connection, since the time is near when they may be given an orderly arrangement and when the subjects least developed from lack of space may have the opportunity for growth. By transferring to the new building, as proposed to Congress, the subjects which are best represented, which have been as a whole most completely classified and can, therefore, be most advantageously exhibited for the benefit of the public, namely, ethnology, archeology, natural history, and geology, the present Museum building may be given over to the arts and industries. In several branches of this subject the collections are already important and extensive, and arrangements are under way for large and valuable additions. Certain halls in the Smithsonian building were originally planned for the gallery of fine arts, and with a moderate expenditure they can be adjusted to suit the requirements of to-day.

With its collections thus distributed between the three buildings, all fireproof, and of substantial construction, the National Museum may be expected to enter upon an era of renewed prosperity and usefulness.

While it is the primary duty of a museum to preserve the objects confided to its care, as it is that of a library to preserve its books and manuscripts, yet the importance of public collections rests not upon the mere basis of custodianship, nor upon the number of specimens assembled and their money value, but upon the use to which they are put. Judged by this standard, the National Museum may claim to have reached a high state of efficiency. From an educational point of view it is of great value to those persons who are so fortunate as to reside in Washington or who are able to visit the nation's capital. In its well-designed cases, in which every detail of structure, appointments, and color is considered, a selection of representative objects is placed upon view to the public, all being carefully labeled individually and in groups. The child as well as the adult has been provided for, and the kindergarten pupil and the high-school scholar can be seen here, supplementing their class-room games or studies. Under authority from Congress, the small colleges and higher grades of schools and academies throughout the land, especially in places where museums do not exist, are also being aided in their educational work by sets of duplicate specimens, selected and labeled to meet the needs of both teachers and pupils.

Nor has the elementary or even the higher education been by any means the sole gainer from the work of the Museum. To advance knowledge, to gradually extend the boundaries of learning, has been one of the great tasks to which the Museum, in consonance with the

spirit of the Institution, has set itself from the first. Its staff, though chiefly engaged in the duties incident to the care, classification, and labeling of collections in order that they may be accessible to the public and to students, has yet in these operations made important discoveries in every department of the Museum's activities, which have in turn been communicated to other scholars through its numerous publications. But the collections have not been held for the study of the staff nor for the scientific advancement of those belonging to the establishment. Most freely have they been put at the disposal of investigators connected with other institutions, and, in fact, without the help of many such the record of scientific progress based upon the material in the Museum would be greatly curtailed. When it is possible to so arrange the investigator comes to Washington; otherwise such collections as he needs are sent to him, whether he resides in this country or abroad. In this manner practically every prominent specialist throughout the world interested in the subjects here well represented has had some use of the collections, and thereby the National Museum has come to be recognized as a conspicuous factor in the advancement of knowledge wherever civilization has a foothold.

SOME IMPORTANT MATTERS OF THE YEAR.

The collections of the Museum were increased to the extent of approximately 219,505 specimens, of which 176,263 were biological and 32,755 geological, while 10,487 pertained to the several subjects grouped in the Department of Anthropology.

The most important contributions in ethnology were illustrative of the natives of Borneo, the Philippine Islands and Guam, the cliff dwellers of northwestern Arizona, the Zuni Indians of New Mexico, and the Tahltan Indians of British Columbia. Excavations at the Casa Grande ruin, Arizona, yielded an interesting collection of pre-Columbian objects, and additional archeological material was received from Mexico, Bolivia, Egypt, and India. The division of physical anthropology obtained many valuable series of specimens from various sources, and arrangements were made with two of the exploring expeditions now making excavations in Egypt to secure some of the human remains found in the ancient tombs, this class of objects having hitherto been generally disregarded. A large number of models and actual examples of devices, deposited by the Patent Office, form a most noteworthy addition in technology. The objects were selected with reference to their permanent value and as illustrating the progress of invention through a long term of years. They relate to many subjects and are being arranged in the public halls.

An exceptionally interesting loan, which is attracting much attention, is the flag which floated over Fort McHenry at the time of its

bombardment in 1814, and was made memorable as the "Star Spangled Banner" by the verses of Francis Scott Key. Among other loans were several art collections of metal work, porcelain, lacquer, ivory, etc., mainly from the Orient; an addition to the exhibit of Jewish religious ceremonial objects; and many pieces of china and cut glass used at Mount Vernon during the life of Washington.

In the Department of Biology, the more important accessions of mammals and birds came from Malaysia, the Philippines, and Costa Rica. The Bureau of Fisheries transmitted extensive collections of fishes and invertebrates chiefly obtained during the exploration of the steamer Albatross in the Pacific Ocean. The final division of the greater part of the collection of marine invertebrates obtained during the early explorations of the Bureau of Fisheries on the Atlantic coast, which had been retained for study at the museum of Yale University, resulted in the transfer to Washington of over 73,000 specimens, representing an extremely large number of species and including the types of 355 species. The division of insects received about 53,000 specimens, mostly American; and the division of plants about 25,000 specimens, principally from North and Central America.

The geological accessions comprised several of exceptional value, especially in paleontology. Of fossil invertebrates there were two large described collections, containing many types; the material obtained in the course of explorations of the Cambrian rocks of British Columbia and Idaho by the Secretary of the Institution, and of the paleozoic formations of Tennessee and Virginia by the curator of the division; and important transfers from the Geological Survey. The division of fossil vertebrates received two noteworthy additions, one consisting of a large number of rare species from various horizons in the United States and South America, the other of the remains of several species of mammals collected on the Smithsonian expedition to Alaska. The department also received several series of rocks and ores, a number of rare minerals, and three meteorites.

The collections of all classes have been maintained in a good state of preservation, though lack of space and of a sufficient number of expert assistants has rendered it impossible to systematically classify and arrange a large proportion of the material. Much important research work was carried on and many valuable contributions to knowledge were made public.

In the exhibition halls, which have long been overcrowded, and in which the display of new material in quantity is practically dependent upon the withdrawal of older collections, some changes and additions were made, the latter mainly at the expense of the passageways and the convenience of the public, in order to find room for several attractive loan collections. In this manner the picture gallery has been

utilized to almost its entire capacity in the interest of the superb assemblage of laces, embroideries, fans, porcelains, and other kindred objects brought together by a number of the ladies of Washington, as explained below. The average daily attendance of visitors amounted to nearly 1,000, a number which would be greatly increased were it possible to extend the hours of opening to Sundays and evenings.

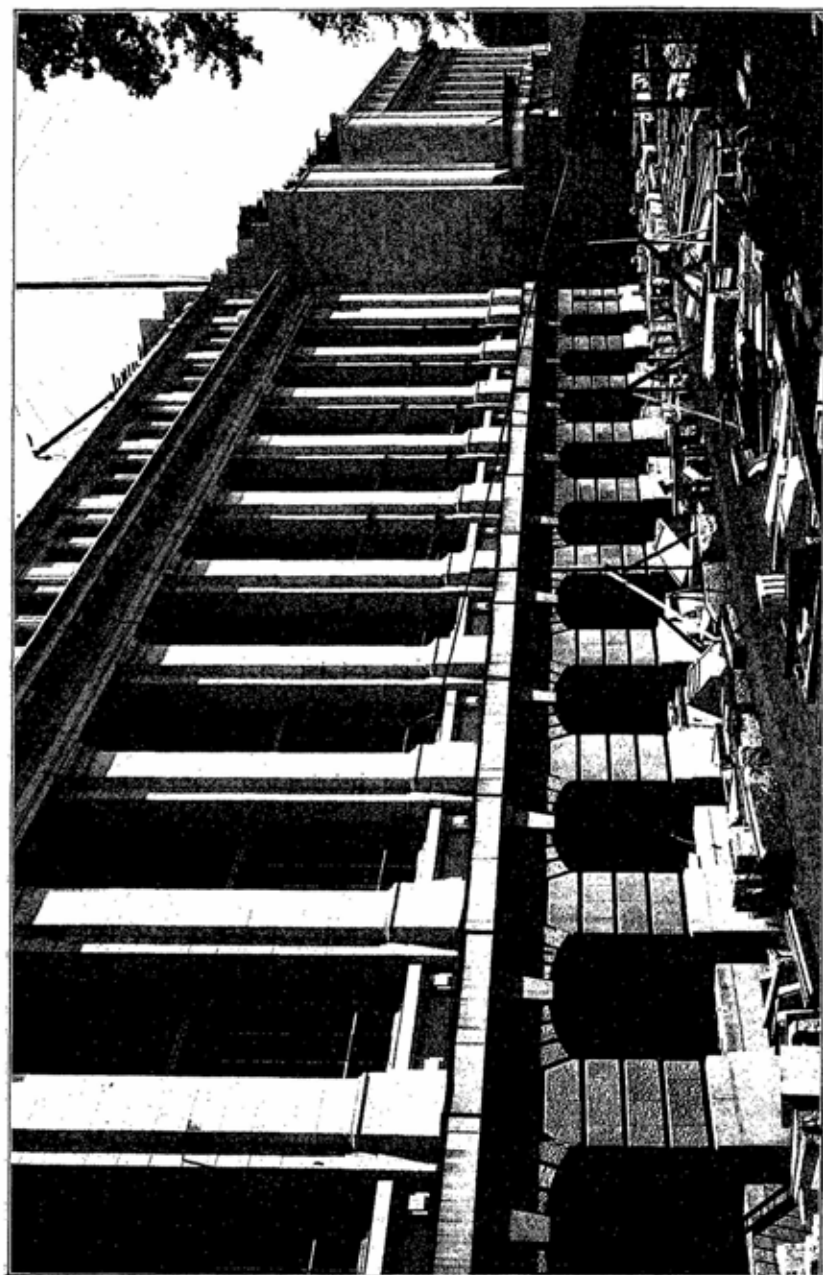
About 26,000 duplicate specimens were utilized in making exchanges and in supplying material to educational institutions. The publications comprised 8 volumes and parts of 2 unfinished volumes, all of which, except the annual or administrative report, were descriptive of Museum collections. The library, wholly restricted to subjects coming within the scope of the Museum, received 3,257 books, 4,470 pamphlets, and 247 parts of volumes, a large proportion of which were acquired as gifts or in exchange. Interesting exhibits were made at the Jamestown Ter-Centennial Exposition and the International Maritime Exposition at Bordeaux, France, both of which were held during the summer and early fall of 1907.

NEW BUILDING FOR THE NATIONAL MUSEUM.

The progress of the work on the new building for the National Museum was greatly hindered, as in previous years, by delays in obtaining the white granite from Vermont within the time limits fixed by the contracts. The quarry, the cutters, and the railroads have all been at fault in bringing about this unfortunate condition, which has retarded the completion of the building for many months, and has caused a considerable extra expense.

At the close of the year the exterior walls, except those inclosing the south pavilion and the dome, for which the stone had not been received, were finished, and the construction of the roofs was well under way. The interior structural walls and piers and the floors were also completed in the rough, and many of the metal window frames of the first and second stories were in place. Some of the latter had likewise been glazed. So much work still remains to be done in the interior, however, such as the building of partitions, the laying of floors, the plastering, the installation of the heating, ventilating, and lighting plants, with their immense ramifications of pipes and wires, the completion of the windows, and countless lesser details, that the expectation held forth of being able to make some use of the building by January, 1909, has had to be abandoned. The best that can now be looked for is that the storage and laboratory quarters may be practically ready for occupancy toward the end of the fiscal year.

This splendid large building, which covers a greater area than any other government structure in Washington except the Capitol, was



NEW BUILDING FOR UNITED STATES NATIONAL MUSEUM. SOUTH OR MAIN FRONT, SHOWING PROGRESS OF WORK, JULY 8, 1908.

authorized by Congress in the sundry civil act for 1904, its limit of cost being fixed at \$3,500,000. The preliminary plans received the approval of a committee of the Board of Regents on January 27 of that year, but it was not until several months later that the working drawings were sufficiently advanced to make the initial contracts. The ground was first broken on June 15 by the Secretary of the Institution in the midst of an informal gathering. The necessary excavations were completed during the summer and the heavy concrete foundations on November 9, 1904. Since then the work would have gone on continuously and rapidly but for the delays occasioned by the slow delivery of granite, as most other contracts have been satisfactorily complied with. About four years, therefore, have already been consumed in the building, and to these it now appears certain that another will be added.

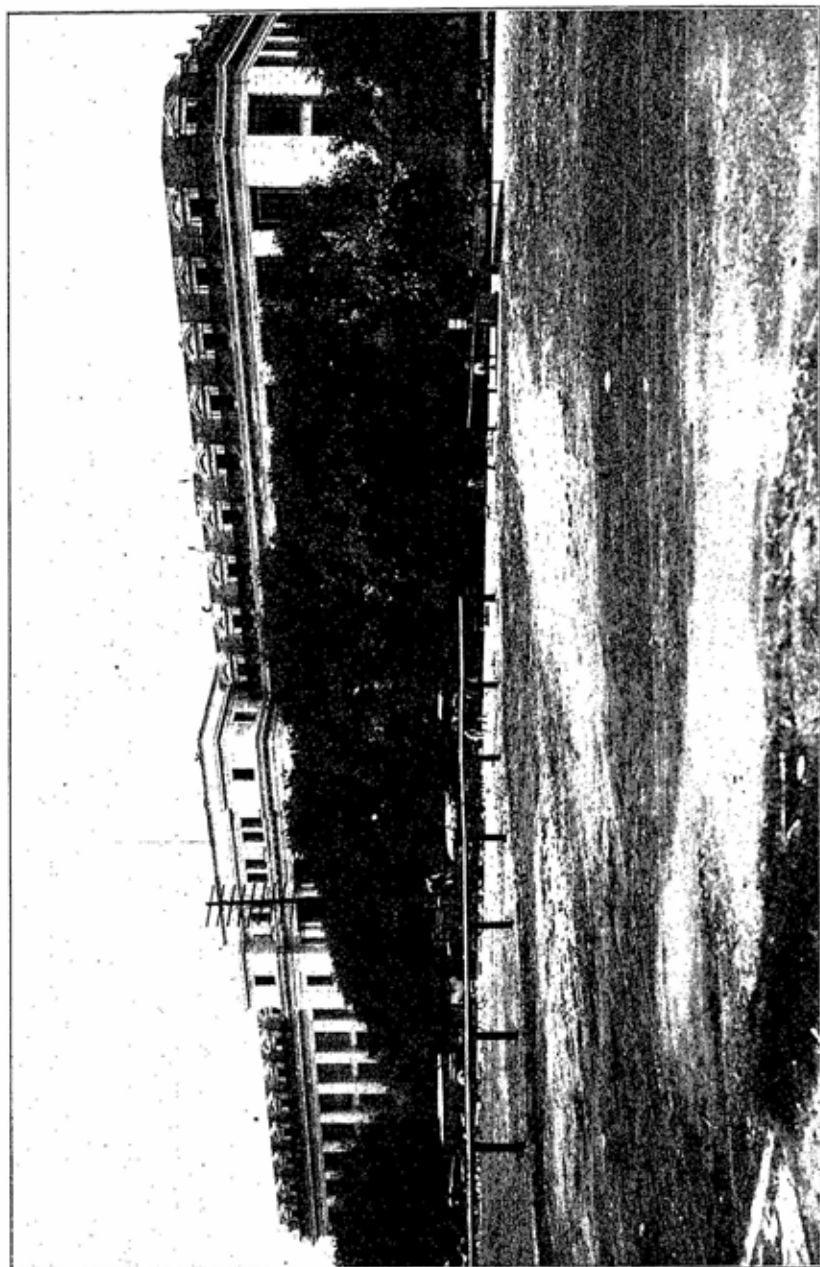
The importance of this new building will be appreciated by all who have kept in touch with the growth of the National Museum and the progress of its activities, as described in these reports from year to year. The number of specimens received has been enormous, averaging nearly a quarter of a million annually, while the value of the material thus brought together is beyond calculation. Nature, as comprehended in the subjects of zoology, botany, geology, ethnology, and archeology, predominates over art in a very marked degree, both in the extent and value of the collections and in the progress made in their study, classification, and exhibition. It was for the accommodation of these collections, whose diversity and importance are elsewhere explained and which illustrate the resources and many economic problems primarily of the territory of this country, that a new building was most urgently demanded and the one in question has been planned. When the transfer has been accomplished, the present Museum building can be wholly given over to the arts and industries, for which it was mainly constructed and has been partly utilized.

The new building is located on the Mall directly in front of the Smithsonian building, which it faces. It is a massive and dignified granite structure, four stories high, with a frontage of 561 feet, a depth of 365 feet, and a height of 82 feet. Its shorter axis is in a line with the center of Tenth street, through which it may be reached from Pennsylvania avenue, distant only three blocks. The principal external feature of the building is a large square pavilion at the middle of the south side, terminating in four pediments, one on each face, at some distance above the main roofs. Inclosed by the pavilion is a rotunda 80 feet in diameter, with four massive, ornamental piers to be surmounted by a curved ceiling reaching a height of 127 feet 7 inches. The exterior structure of the rotunda will be

carried above the pediments of the pavilion in the shape of a circular granite wall, capped by a simple rounded dome with slate covering, attaining a height of 162 feet 2 inches above the ground line. The south pavilion contains the main entrance, sheltered by a portico supported by heavy Corinthian columns, of which there are 6 in the outer row. Below these are the steps and platforms of the approaches from the driveway, all to be built of granite.

Aside from the south pavilion the exterior of the building is practically without ornamentation, and the same is true of the interior, as explained below. Well-designed lines and proportions have produced an air of refinement most pleasing and effective, which any added features in the way of embellishment could only serve to depreciate. The purpose of the building is evident from the outside. The window openings predominate, being everywhere, except in the upper story, much wider than the intervening piers. The color tone is very light. The granite for the exterior walls has come from three sources. A pink or warm gray variety from Milford, Massachusetts, has been used for the basement; a nearly white stone from Mount Airy, North Carolina, for the upper story; and a pure white granite from the recently opened quarry at Bethel, Vermont, for the two main stories and the south and north pavilions. Such parts of the roofs as can be seen from the outside are covered with light green slate, the same as will be used for the dome, which harmonizes well with the stone work.

In ground plan the building has a general rectangular outline, but fundamentally it consists of three main wings joined to the south pavilion in the shape of the letter T. Two series of ranges, placed at right angles and connecting with the wings near their outer ends, compose the northeastern and northwestern parts of the building, and help to inclose two uncovered courts, each of which is 128 feet square. The interior width of the wings is 114 feet, of the ranges 54 feet. In the latter the lighting is entirely from windows, and thus one story succeeds another uniformly and without any openings through the floors. A different arrangement was necessary for the broad wings and has been worked out as follows: The lower story, which has been termed the "basement," although raised several feet above the adjacent street, is wholly covered by the floor of the next or main story, and in the middle parts will require artificial lighting. This condition, however, will not prevent the utilization of all the space in this story. The middle of the eastern wing will be occupied by the boilers and machinery, and that of the western by a large inclosure for the storage of alcoholic specimens, while that of the central wing will be used as an exhibition hall for large objects, besides serving as a passageway from the north entrance to the auditorium in the south pavilion. The windows will furnish light



NEW BUILDING FOR UNITED STATES NATIONAL MUSEUM, NORTH FRONT, SHOWING PROGRESS OF WORK, JULY 8, 1908.

to laboratories, workshops, offices, etc., which are arranged along the outer walls and extend through the adjacent ranges. The height of the story is about 20 feet.

The main story, as above intimated, also presents a continuous floor space, and in order to completely light it the middle part of each wing, to a width of 50 feet, is carried up through the second story to a ceiling light underneath a roof skylight. The sides of the story to a depth of 32 feet are lighted from the windows, but at the outer ends of the wings the distance is somewhat greater. The line of demarcation between the two sections is marked by a row of piers, which helps to support the second story. This open construction is the main feature of the wings, and furnishes three exceptionally large halls well adapted to the exhibition of collections for the public. By means of screens the lateral sections can be partly cut off from the skylighted area, and divided into apartments so as to meet the varying requirements of installation without destroying the architectural effect of the hall as a whole. The height at the sides is about 21 feet, and from the floor to the ceiling light about 52 feet. The second story of the main wings, as will be understood from the above description, is equivalent in space to only the lateral and end sections of the first story. It is separated from the skylighted area by walls, pierced at intervals by large doorlike openings, from which a view of the main halls may be obtained. Its height is about 20 feet, and it derives its light entirely from windows. It will also be utilized for public exhibition. The third story corresponds with the second in the amount and distribution of floor space. It will, however, be entirely divided into rooms for laboratories, for the storage of collections, and for the general administrative offices. In the attics of the wings some additional space for storage will be obtained.

The building will be entirely fireproof, and will contain every modern convenience that is deemed essential for museum purposes. A monumental staircase has been omitted on account of the space it would occupy, but there are several stairways at different points, and passenger elevators at the two entrances.

NATIONAL GALLERY OF ART.

In accordance with the plan proposed the year before, with the object of maintaining a proper standard of merit in the acceptance of paintings and works of sculpture for the National Gallery of Art, a committee of five artists to act in an advisory capacity was designated in the spring of 1908. The selection of three members of the committee was requested of three leading art associations, the other two being named by the Smithsonian Institution. This committee held its first meeting at the Institution on April 16, 1908. As then

organized, it is constituted as follows: Mr. Francis D. Millet, president; Mr. Frederick Crowninshield, representing the Fine Arts Federation, of which he is the president; Mr. Edwin H. Blashfield, representing the National Academy of Design; Mr. Herbert Adams, representing the National Sculpture Society, of which he is the president; and Mr. William H. Holmes, of the Smithsonian Institution, secretary of the committee.

The failure to secure last winter the means necessary to provide suitable quarters for the paintings belonging to the gallery has retarded the segregation and arrangement of the collection, which, therefore, continues to be exhibited under very adverse conditions, not at all likely to attract the attention of those who might otherwise gladly contribute to its growth. Some important donations of pictures were, however, received.

Mr. William T. Evans has added to his collection of contemporary American artists since the last report paintings by Hugo Ballin, George de Forest Brush, F. S. Church, Henry Golden Dearth, Charles Melville Dewey, Paul Dougherty, Ben Foster, Childe Hassam, Ernest Lawson, Willard LeRoy Metcalf, Robert Reid, R. M. Shurtleff, John H. Twachtman, Henry Oliver Walker, Worthington Whittredge, Carleton Wiggins, Irving R. Wiles, and Frederick Ballard Williams. Among other gifts of paintings were the following: "Crossing the Ferry," by Adrien Moreau, presented by Mrs. James Lowndes in memory of her father, Lucius Tuckerman; and "Indian Summer Day," by Max Weyl, presented by thirty of his Washington friends in commemoration of the seventieth anniversary of the artist's birth. Mr. Charles L. Freer has made very extensive additions to his large collection of American and oriental art, donated to the Institution in 1906, which, it will be recalled, is to remain in the possession of Mr. Freer during his life.

The collection of thirteen historical marine paintings executed by the late Edward Moran during the later years of his life has, through the courtesy of Mr. Theodore Sutro, of New York, been temporarily deposited in the gallery at the Museum building. The several pictures are entitled as follows: "The Ocean—The Highway of All Nations;" "Landing of Lief Erickson in the New World in the Year 1001;" "The Santa Maria, Nina, and Pinta;" "The Debarkation of Columbus;" "Midnight Mass on the Mississippi, over the Body of Ferdinand De Soto, 1542;" "Henry Hudson entering New York Bay, September 11th, 1609;" "Embarkation of the Pilgrims from Southampton, August 5th, 1620;" "First Recognition of the American Flag by a Foreign Government, in the Harbor of Quiberon, France, February 13th, 1778;" "Burning of the Frigate Philadelphia in the Harbor of Tripoli, February 16th, 1804;" "The Brig Armstrong engaging the British Fleet in the Harbor of Fayal, September 26th,

1814;" "Iron versus Wood—Sinking of the Cumberland by the Merrimac in Hampton Roads, March 8th, 1862;" "The White Squadron's Farewell Salute to the Body of Captain John Ericsson, New York Bay, August 25th, 1890;" "Return of the Conquerors—Typifying Our Victory in the late Spanish-American War, September 29th, 1899."

By act of Congress, approved May 22, 1908, the colossal marble statue of Washington by Horatio Greenough, completed in 1840 and since 1875 occupying a position in front of the main steps of the Capitol, was transferred to the custody of the Smithsonian Institution. It is intended to place this work in the Smithsonian building until a more fitting location for it shall be found, probably in connection with the National Gallery of Art. The statue has been greatly injured by its long exposure in the open air, but its preservation has been urged by artists qualified to pass upon its merits.

AN IMPORTANT ART MOVEMENT.

The Centennial Exhibition of 1876 afforded the first opportunity for extending the activities of the Museum into the field of the arts and crafts. In fact, the extensive collections obtained in that connection, which influenced the erection of the present Museum building, completed in 1881, belonged largely in this category. They consisted principally of gifts contributed by over thirty different nations and many American exhibitors, and while none of the subjects represented was covered comprehensively, yet the material as a whole formed an excellent nucleus from which to build. Most of the objects were placed on exhibition in the beginning, but the greater part was subsequently crowded out and sent to storage. Among the subjects retained on display were several that lend themselves to artistic workmanship of a high order. The exhibits along these lines have been added to by donation and purchase, and supplemented by important loans, and although they are still relatively small, they contain much that is of value and importance. In the graphic arts, ceramics, metal work, glass work, and lacquer there is now a partial segregation of materials, but some of the finest examples of these subjects and illustrations of others are incorporated with the historical collections or have been temporarily installed among the exhibits in ethnology. That the early efforts toward building up this department were not systematically continued has been mainly due to the lack of space, but with the additional room soon to be acquired the work will be actively resumed, in the hope that before many years creditable progress can be shown in the matter of illustrating the materials, processes, and finished products, as well as the history of the development, of the various arts and handicrafts.

As the success of this undertaking must depend to a great extent on private contributions, it is extremely gratifying to announce that during the past year a movement has been started for the very laudable purpose of stimulating public interest in a direction where individual help is especially needed. The field is one belonging essentially to woman—the adornment of the church, the home, and the person—since its development has been mainly due to her inspiration and its achievements have resulted largely from her handiwork. With boundaries not clearly definable and with a large percentage of objects difficult of classification, owing to their composite nature, the range of material employed is so great as to furnish exceptional opportunities for the skill of the designer, the sculptor, and the painter.

The matter was first brought to the attention of the Museum by Mrs. James W. Pinchot in 1907, with the tender of assistance on the part of herself and of several other ladies of Washington, the proposition being to assemble a loan collection which, it was expected, would lead to permanent contributions as has happened in connection with other museums. This offer was heartily accepted, but action was deferred until May, 1908, when, at an informal meeting called to discuss the question, a committee, with Mrs. Pinchot as chairman, was appointed to take charge of the work. Although only a few weeks then remained in the fiscal year covered by this report, the results accomplished during this time through the active efforts of the committee proved not only very satisfactory, but especially noteworthy as evincing the interest which the subject had aroused. Unfortunately, there was no clear space available for the exhibition in either of the buildings, and it became necessary to make the installation along one side and between the screens of the improvised picture gallery. This caused much crowding of the cases, of which 20 were required, but the lighting was found to be excellent. The arrangement of the objects was attended to by the ladies of the committee and others invited to assist.

Inasmuch as the work is being continued during the current year and many additions and changes are expected to be made, a detailed account of the collection will be reserved for the next report. It may be said here, however, that the material brought together before the close of the year comprised over 500 pieces, many of them old, rare, and costly, and covered a very diversified field of European art craft. The manner of its presentation, though not systematic, which would have been difficult under the circumstances, has been attractive and effective, and there is no doubt that the result has been appreciated by the public. The subjects principally represented are laces, embroideries, fabrics, fans, china, miniatures, enamels, gold and silver ware,

jewelry, ivory carving, and bookbinding, besides which there are many miscellaneous articles of novel and exquisite workmanship. The contributors to the loan collection, numbering 17, were as follows: Mrs. Theodore Roosevelt, Miss Lydia Spencer Biddle, Mrs. James S. Bowdoin, Miss M. C. Codman, Mrs. Nicholas Fish, Mrs. James S. Harlan, Mrs. Elizabeth C. Hobson, Mrs. Julian James, Mrs. Richard G. Lay, Mrs. C. A. Oswell, Mrs. James W. Pinchot, Mrs. Charles W. Richardson, Mrs. Thomas F. Richardson, Mrs. G. M. Robeson, Mrs. F. W. Schley, Miss Olive Risley Seward, and the Misses Trapier.

In addition to the above, acknowledgments are especially due to Mrs. Whitelaw Reid for the gift of a collar and pair of cuffs of Venetian point lace of the latter part of the eighteenth century.



SUMMARY OF THE OPERATIONS OF THE YEAR,

APPROPRIATIONS.

The appropriations made by Congress, in the sundry civil act, for the maintenance and activities of the National Museum during the year covered by this report, namely, from July 1, 1907, to June 30, 1908, were as follows:

Preservation of collections.....	\$190,000
Furniture and fixtures.....	20,000
Heating and lighting.....	18,000
Building repairs.....	15,000
Books.....	2,000
Rent of workshops.....	4,580
Postage.....	500
Printing and binding.....	33,000
Total.....	283,080

There was also appropriated in the same act, approved March 4, 1907, the sum of \$1,250,000 for completing the new building for the National Museum, being the balance of the amount, \$3,500,000, named in the original act authorizing its erection.

Following are the appropriations for the year ending June 30, 1909:

Preservation of collections.....	\$190,000
Furniture and fixtures.....	50,000
Heating and lighting.....	22,000
Building repairs.....	15,000
Books.....	2,000
Rent of workshops.....	4,580
Postage.....	500
Printing and binding.....	34,000
Total.....	318,080

BUILDINGS.

An account of the progress made on the new building in course of erection for the National Museum has been given on a previous page. Of the repairs made on the present buildings some were of

considerable importance, as follows: The old slate roofs over the south hall and the southeast and northwest courts of the Museum building were replaced with tin roofs of a superior quality, similar to those constructed over other parts of the same building during the two previous years. This work, completed on November 3, 1907, also included the substitution of new tin valleys for the old ones on the south and east sides of the northwest court and the north and east sides of the southeast court. Other exterior repairs consisted in renewing worn-out flashings on the ranges and in repainting the roofs built the year before, besides attending to many minor matters pertaining to the roofs, walls, and windows. The only roof which now remains to be replaced is that over the central rotunda.

In view of the expenditures in connection with the roofs, but little means were available for continuing the isolation of the exhibition halls as a measure against the spread of fire, as explained in former reports. Some progress, however, was made in this direction. The several window openings between the northeast pavilion and the art gallery were completely closed with macite, and fireproof doors were substituted for the wooden ones, thus placing the latter hall in an exceptionally safe condition from this point of view. Macite partitions were also erected to a limited extent in a number of other places, where the requirements seemed most urgent. The western hall and adjoining range in the Smithsonian building, the walls of which had become much defaced, were partly repainted, 12 of the windows in the former were thoroughly repaired, and certain fireproof walls and doors were added in the basement, so as to completely shut in the alcoholic storage.

Steam was first raised in the heating boilers on October 10, 1907, and was continued with little interruption until the 16th of May following. The fuel consumed amounted to 880 tons of coal and 52 cords of wood. Some changes were made in a part of the conduits carrying the electric lighting wires in order to secure better insulation. This system, which now embraces about 28 miles of wire, with about 2,000 lamps, 9 motors, and 160 fans for hot weather, together with the call box and fire alarm systems, was maintained in good condition.

At the close of the year there were on hand 2,369 exhibition cases, 2,461 storage cases, and 1,621 pieces of office and other furniture. Sixty-six of these were made during the year in the workshops of the Museum, 54 were purchased from contractors, and 24 obtained from expositions. Storage drawers to the number of 1,212 were also acquired. A number of old and worn-out pieces of furniture were condemned and sold. The experiments looking to the construction of fireproof furniture for the new building, noted in the last report, were continued.

COLLECTIONS.

DEPARTMENT OF ANTHROPOLOGY.

The additions to this department were comprised in 317 accessions and amounted to 10,487 objects, of which over two-thirds belonged in the divisions of ethnology and prehistoric archeology.

Ethnology.—The ethnological accessions exceeded the average of past years in both number and value. The most important one, presented by Dr. W. L. Abbott, consisted of about 600 specimens gathered in West Borneo, south of the region explored the previous year by this generous contributor. While mainly illustrative of the basket work of the region, it includes a large series of swords, daggers, knives, and blowguns, a number of objects of personal adornment and others relating to religious beliefs. The Abbott collection is rapidly becoming one of the most notable of its kind in the world, in view both of its extent and diversity and of the care with which it has been assembled and labeled. Several noteworthy collections from the Philippine Islands were also received. A fine series of weapons, basketry, costumes, models, etc., was donated by Maj. George P. Ahern, U. S. Army, and many costumes, weapons, basketry, and domestic utensils from the Igorot and Ilocano of Luzon were contributed by Maj. E. A. Mearns, U. S. Army, in continuation of his former gifts. Capt. Jesse R. Harris, U. S. Army, presented 54 objects from the Moros of Mindanao, including household utensils, tools, weapons, and musical instruments, and Mr. W. E. Safford, of the Department of Agriculture, 42 examples of the weapons with which Spain in the eighteenth century armed the natives of Guam against attacks by pirates. The latter were made by a native armorer, descended from Philippine stock. Many stone and shell implements, pertaining to the extinct Chamorro of Guam, were obtained from Mr. L. H. T. Costenoble. Surg. H. C. Curl, U. S. Navy, donated a small but excellent collection of Australian weapons and cult objects. A large number of oriental weapons, costumes, and other objects, obtained by United States Senator Albert J. Beveridge during his recent travels in the Far East, was secured as a loan for exhibition. The collection includes a series of Filipino and Moro weapons, Japanese swords, spears, and knives, Chinese hats, embroideries, and weapons, among the latter being a jade-handled dagger of exquisite form and workmanship. Noteworthy also is a huge votive sword of the Tokogawa shoguns, bearing inscriptions of Buddhist texts in Chinese and Sanskrit characters. It is nearly 9 feet long and is constructed with all the skill in art for which the Japanese are famous. Another large loan collection of exceptional interest consists of several hundred examples of Japanese metal and

other art work, assembled by Gen. Oliver Ellsworth Wood, U. S. Army, during a four years' official residence in Japan, including the period of the Russo-Japanese war, as United States military attaché. It comprises superb brass vases, lanterns and candlesticks, lacquers, bronzes, screens, and wood carvings, a pair of costumed dolls 300 years old, and a fine series of over 50 teapots, oil and sake vessels. Special mention should be made of a pair of handsome bronze flower vases, a gift to the Smithsonian Institution by Mrs. Adeline Lanman. These vases, which are of chaste form and inlaid with several different metals, were presented by the Emperor of Japan in 1883 to Mr. Charles Lanman, American secretary of the Japanese legation at Washington. President Roosevelt added to his numerous contributions a splendid embroidered Arabian saddle cloth.

Africa was represented in three accessions. Mr. J. D. McGuire, collaborator in the Museum, presented an ancient Kongo war horn made of the tusk of an elephant. The Leipzig Museum of Ethnology sent in exchange 231 weapons, fetiches, implements, and costumes from the German possessions, and Miss Louisiana Durant donated 59 objects from the Kaffir tribes of South Africa, a people which has been but poorly represented in the National Museum.

From the Museum of the Brooklyn Institute about 350 objects from cliff dwellings in the Canyon de Chelly and Canyon del Muerto, northwestern Arizona, were obtained in exchange. This collection, consisting of sandals, cotton cloth, basketry, matting, and other textiles, wooden implements, stone axes, mauls, grinding stones, etc., which had been preserved in the dust of the dwellings, is the largest which the Museum has received from the region of the northern cliff dwellers, and will prove of great value for comparison with the material secured by the Museum-Gates expeditions in the southern cliff-dwelling district. Mrs. Matilda Coxe Stevenson, of the Bureau of American Ethnology, procured illustrations of the arts and industries of the Taos Indians of New Mexico, and interesting specimens relating to the textile industry of the Zuni Indians of the same territory. Mr. George G. Heye, of New York, transmitted, in exchange, 83 objects from the Iroquois tribes of New York and Canada, comprising masks, rattles, and other ceremonial objects, leggings, caps, brooches, mortars, pestles, bows and arrows, musical instruments, coins, and a fine wampum belt. A collection of 13 silver brooches, many of which were heirlooms, from the New York reservations of the same tribe, was purchased. Mr. J. D. McGuire contributed a sash of colored wool yarns interwoven with bead work, a production of the Creek Indians, probably 100 years old.

A series of 212 objects illustrating the industrial and social life of the little-known Tahltan Indians, of the Stikine River, British Columbia, gathered by Lieut. G. T. Emmons, U. S. Navy, was received

through the Bureau of American Ethnology. A small but interesting collection from Mr. A. Bienkowski, of Panama, consists of masks and clothing worn in the ceremonial of Diabolitos practiced by the Veragua Indians. Five Indian paintings, executed by J. M. Stanley in the early part of the last century and formerly belonging to Prof. Joseph Henry, were presented by the Misses Henry. A number of laces, embroideries, and linens made prior to 1830 and handed down from the Plimpton family, were presented by Miss Mary Noyes.

Among the models of inventions transferred from the Patent Office were many relating to fire making, heating, cooking, illumination, culture history, etc., which were temporarily assigned to this division.

The ethnological groups and objects exhibited at the Jamestown and Bordeaux expositions were returned during the winter and spring. The routine work of caring for the collections went forward as in previous years. Many objects of metal were found to require special treatment for the removal of rust and the preservation of the surface, and it is now possible to say that the methods initiated a year ago to prevent the deterioration of ancient Pueblo pottery have proved beneficial. The group cases in the Catlin, Pueblo, and Eskimo exhibition halls were somewhat changed and rearranged, and the collection of jade implements and throwing sticks was installed in the Eskimo hall. The laces from Miss Mary Noyes, the Hindu objects sent by the Rajah of Tagore, and the collections of Mrs. A. C. Barney, Senator Beveridge, General Wood, and Major Ahern, were placed on exhibition in the west hall and gallery. The General Wood collection occupies four cases in the middle aisle and is one of the most important received in recent years. The Abbott cases, in the gallery of the west hall, were reinstalled and a complete arrangement made of the Kensington cases, three of the latter being filled with art objects from the Abbott-Dyak collection. The remainder of the Philippine collections was provided for in the gallery of the Pueblo court.

The head curator of the department, Prof. O. T. Mason, made a detailed study of the Abbott collection of basket work from southern Malaysia, in order to settle upon a definite nomenclature for the entire Malay region, including the Philippine Islands. There seems to be no limit to basket work in a region where so many adaptable species of bamboos, rattans, palms, and useful hard woods occur. The shapes, structural parts, and technic, while having some features in common with the basket work of America, are mostly of the region. One type called the "mad weave," *anyam gila*, made of three sets of Pandanus stripes, forming rhombs, was minutely worked out. The demands for a carefully prepared vocabulary are the more imperative, since the great popularity of arts and crafts studies is bringing into use terms not hitherto known to basket makers either in England or

America; and as much will be written about this industry in the near future it is very important for authors to reach an agreement in this particular. To give each specimen its full value, the describer should furnish its native name and that of the tribe using it, the location, and the materials. The spelling of the words should be uniform and of good usage, so that the least possible confusion will arise. These subjects are discussed in a manuscript by Professor Mason, entitled: "Vocabulary of Malaysian Basket Work," which has recently been sent to press. Another completed study by the same author on the Abbott collections embraces the trap series, using the term in its broadest sense.

The results of a special research by Dr. Walter Hough, assistant curator of ethnology, on the material in the Museum relating to the pulque industry of Mexico were published in the Proceedings. Doctor Hough also began a study of the blowguns collected by Doctor Abbott in Malaysia, and of the comparative status of blowguns in other regions.

Information on ethnological subjects was furnished to many applicants, and a number of persons visited the division for the purpose of studying its collections or its methods of work and installation. Data relative to Indian costumes were supplied to several artists, including Mr. Francis D. Millet, Mr. William Ordway Partridge, Mr. H. K. Bush-Brown, Mr. Francis P. Wightman, and Mr. E. V. Valentine. Miss M. E. Adams, of Pasadena, California, and Miss Mary Lois Kissell, of the American Museum of Natural History, worked on the basketry collection. Miss Candace Thurber, of New York, examined specimens of Indian quill work and embroidery with reference to technical processes and designs, and Miss M. Kunckell, of Milwaukee, Wisconsin, studied the methods of arranging and labeling Indian photographs, paintings, and plates. Mr. H. J. Spinden, of the Peabody Museum of Harvard University, made use of the material relating to the Nez Percé Indians, on which he is preparing a memoir for the American Anthropological Association. Prof. Emil Goeldi, of Bern, Switzerland, obtained information on the technic of horn, antler, and bone work among the American Indians, and Mr. George K. Holmes, of the Department of Agriculture, material for an article on Indian agriculture in this country before the advent of the whites. Dr. N. Gordon Munro, of Yokohama, an authority on the archeology of Japan, examined the collections from ancient Japanese sites. Mr. Joseph G. Kent, of the Land Office, was instructed as to the collection of data relative to the ancient ruins of the Hopi Indian Reservation in Arizona. Mr. Joseph B. Hingeley, of Minneapolis, made inquiries regarding the medicine charts of the Ojibwa, of which he has translated several, and he has now in course of preparation an article embodying the

Indian conception of their genealogy and migrations. Mr. E. H. Hammond, of the Bureau of Education of Manila, examined the Philippine collection and furnished a large amount of data as to the materials and tribal origin of Philippine basketry. Dr. C. V. Hartman, of the Carnegie Museum, Pittsburg, studied the installation and especially the arrangement of the synoptic series, with a view to introducing this feature in the new Technical Museum in Pittsburg. Dr. George B. Gordon, of the Free Museum of Science and Art, Philadelphia, examined the Eskimo collection for material to incorporate in a report of recent explorations among these people. Information respecting the forms and materials of the Apache and Navaho Indian arrows, necessitating an interesting study, was furnished by request to the Department of Justice.

In January the head curator lectured before the students of the Naval Medical School on the history of culture, with the special object of showing how, as medical officers, they might render important service to the National Museum. Later he addressed the arts and crafts department of the George Washington University on the basket work of the Malaysian area.

Prehistoric archeology.—The additions to this division comprised several of exceptional importance. The Bureau of American Ethnology transmitted nearly 800 archeological specimens, being part of the results of joint explorations by the bureau and the Department of Archeology and Paleontology of the University of Pennsylvania at Key Marco, Florida, in 1896, under the direction of Mr. Frank Hamilton Cushing. The collection is of great scientific importance, representing a people and a culture of which no knowledge had previously been obtained. The series of objects is more complete and more valuable than any similar one obtained from a single locality or number of closely related sites north of Mexico, and throws much new light on the state of culture, the manner of life, and the industrial and artistic achievements of the Gulf coast tribes of pre-Columbian times. The entire collection was kept together until 1900, when it was separated into two nearly equal parts, one passing into the possession of the Bureau of Ethnology. A soapstone pot from Mecklenburg County, Virginia, and two grooved axes of clay ironstone and a rubbing hammer stone obtained by Mr. Thomas J. Wilson near Hughes Springs, Cass County, Texas, were also received from the same bureau.

Among the gifts were a silver image from ruins on an island in Lake Titicaca, Bolivia, in the well-known style of the Titicacan region, presented by Dr. T. S. K. Morton, of Philadelphia; and a series of flint implements from the Fayum desert, Egypt, and one of paleolithic quartzite implements, together with two stone hatchets, from the Pennaar River Valley, India, contributed by Mr. H. W.

Seton-Karr, of London, England. A carved stone image in the form of a standing figure with elaborate headdress, 20½ inches high, from the ruins of ancient Tepoxtlán, State of Morelos, Mexico, was lent by Mrs. Harriet L. Dowling, of Washington, and 4 collections, consisting mainly of prehistoric pottery, together with many shell and stone artifacts, were deposited by Mr. A. H. Blackiston, of Cumberland, Maryland. A cast of the largest known stone celt, found near Granite, Illinois, in 1906, was received in exchange from the Public Museum of Milwaukee. Many plaster casts of prehistoric stone implements owned elsewhere were made in the Museum laboratory by Mr. H. W. Hendley.

Comparatively few additions were made to the exhibition collections, which occupy the large upper hall in the Smithsonian building, but the labeling and recording of the many specimens received during the year occupied much time. The classification and arrangement by subjects of the general collections, which are extensive and of great importance, were continued. Researches based on this material were chiefly carried on by Mr. William H. Holmes, curator of the division, and Dr. J. W. Fewkes, collaborator. Several persons not connected with the Museum also made use of the collections. Among these were Mr. James C. Christie, of Glasgow, Scotland, who worked on material from the West Indies, Mexico, and Central America; Dr. Arthur L. Mitchell, of Aurora, New York, who examined certain kinds of stone implements from the United States; and Mr. C. H. Gallup, curator of the Firelands Historical Museum, of Norwalk, Ohio, who studied the arts of the mound builders. The exchanges of specimens, though not unimportant, were limited in number and extent.

The sundry civil act for 1908 provided for continuing the excavations at Casa Grande ruin, in Arizona, under the direction of the Secretary of the Smithsonian Institution, and for the protection and improvement of the Mesa Verde National Park, Colorado, under the supervision of the Secretary of the Interior. Dr. J. W. Fewkes, who conducted operations at both of these places, obtained a large and valuable collection, but at the end of the year it had not reached the Museum.

Historic archeology.—Among the accessions in historic archeology may be mentioned a gift from President Roosevelt of a brass model of the obelisk of Rameses II, the original of which stood in front of the temple of Luxor, but is now in the Place de la Concorde in Paris; some valuable inscribed pottery fragments from Egypt, presented by Mr. F. B. Kilmer; and two wax impressions of a signet ring from Mr. Benjamin H. Boyadjian, of Turkey. This ring, which is engraved with human busts so that the upper part represents a man's face and the lower end the head of a boar, is interesting from both

the mythological and art historical points of view. The exhibits of the division occupy two alcoves in the west hall of the Museum building facing the rotunda. The northwest alcove contains mainly the antiquities of western Asia, namely, the Biblical, Palestinian, Syrian, Assyro-Babylonian, and Persian, while the southwest alcove is occupied by the Egyptian and Hittite antiquities. During the year a special case with Egyptian antiquities was installed and specimens of Egyptian (Coptic) textiles were put on exhibition. Additions were also made to the Bible collection.

Historic religions.—Especially noteworthy among the accessions of the year were 21 objects of Jewish religious ceremonial, added by Dr. Ephraim Benguiat, of New York, to his important loan collection which has been on exhibition for several years. They comprise 2 finely embroidered synagogue veils, 2 silver-gilt breastplates of exquisite workmanship, a silver and brass Hanukah lamp of artistic design, a quaint brass spice holder, composed of 5 pear-shaped compartments surmounted by lions, and 8 framed pictures illustrating the story of Joseph worked in embroidery. Dr. Cyrus Adler, curator of the division, presented a pair of phylacteries from Jerusalem, and Miss Eliza R. Seidmore, of Washington, a model of the church at Borgund, Norway.

The exhibition collections illustrating the historic religions are mainly installed on the south gallery of the west hall, in the following order: Judaism in six wall cases and two Kensington cases, Mohammedanism in two wall cases and one special case, Christianity in four wall cases and two special cases, Brahmanism in two wall cases and one special case, Buddhism in five wall cases and one special case, Shintoism in one wall case, other Eastern religious objects in one wall case, and Parseeism in one special case. Three Kensington cases contain, respectively, collections of amulets and rosaries and a Korean sorcerer's outfit. The S. S. Howland collection of Buddhist religious art in two large cases and colossal statues of Buddha and Vishnu are placed in the rotunda. Objects of the several sections, which for lack of space can not be exhibited at present, such as photographs, prints, etc., are contained in drawers. The Jewish section was partly, and the Christian section entirely, rearranged and labeled. A case of Buddhist rosaries and a statuette of Confucius were added.

A manuscript entitled: The Collection of Jewish Ceremonial Objects in the United States National Museum, containing descriptions of the objects, with photographic illustrations, was completed by Doctor Adler and Doctor Casanowicz. A study of the collection of rosaries by Doctor Casanowicz is in progress.

Physical anthropology.—The more important acquisitions by this division consisted of a large collection of skeletal parts, received in exchange from Prof. George S. Huntington, of the College of Phy-

sicians and Surgeons, New York; 2 series of the brains of anthropoid apes and of monkeys, 1 from West Borneo the other from Sumatra, donated by Dr. W. L. Abbott; 54 specimens, the gift of Prof. F. P. Mall, of Johns Hopkins University; 10 well-preserved skulls from mounds along the Arkansas River, including 1 example of a rare anomaly and several of the flathead deformation, presented by Mr. Clarence B. Moore, of Philadelphia; 3 Eskimo skeletons, obtained on the Smithsonian expedition to Alaska under Mr. C. W. Gilmore; 7 brains and 19 skeletons from various medical schools; 5 Indian skulls and other bones from Casa Grande ruin, Arizona, collected by Dr. J. W. Fewkes; and 2 Filipino skulls, 9 brains, and 15 heads of monkeys, contributed by Dr. Robert Bennett Bean, of the Philippine Medical School, Manila. The gift by Mr. J. G. Crawford, of Albany, Oregon, of a skull with a remarkably low forehead, and a collection of human bones, including another skull with low forehead, made by Mr. Gerard Fowke and transmitted by the Bureau of American Ethnology, are likewise deserving of mention. There were also added to the collection 26 life masks of Indians, 19 of which were made by the assistant curator with the aid of Mr. H. W. Hendley, at the Jamestown Exposition, and 5 busts, prepared from these molds. The Bureau of American Ethnology supplied other valuable material besides that above mentioned, and through its aid a number of Indians were sent to the Museum for measuring and the taking of masks.

In the preservation and installation of specimens the work of the division is entirely up-to-date. A series of skulls with various stages of a proatlas and fusion of the atlas with the skull has been arranged in the laboratory and proves of much interest to visiting physicians as well as anthropologists. The exhibits consist of 32 Indian busts, placed in the Catlin Hall, and of such groups of specimens as can conveniently be shown in the laboratory cases. The latter comprise several collections of crania of special interest, racial pelvises, cranial and dental anomalies; brains, human and comparative; fossilized human bones, with examples of low-developed recent crania, and casts of the European geologically ancient skulls; skulls showing teeth filing and carving, painting and tattooing; examples of ancient American trephining, and skulls showing types and individual variations of artificial deformations.

The scientific work of the division by Dr. Aleš Hrdlička, assistant curator in charge, has been mainly a continuation of that of the previous year, relating especially to the humerus, which is now nearing completion. His paper on skeletal remains and that entitled *Physiological and medical observations among the Indians of the Southwest and northern Mexico* will soon be issued as bulletins of

the Bureau of American Ethnology. Descriptions of two especially interesting skulls, recently received, are in course of publication in the Proceedings of the Museum. A report was furnished to Mr. Clarence B. Moore on the collection of crania which he donated to the Museum, for incorporation in his memoir, and a revision, with additions, of the paper on Brain Weight in Vertebrates, has been undertaken. Finally, several minor reports and a presidential address before the Anthropological Society of Washington by Doctor Hrdlička were based upon his Museum investigations, and he also rendered aid in the preparation of the second volume of the Handbook of Indians for the Bureau of American Ethnology.

In connection with his researches, as well as for the purpose of securing additions to the collections, Doctor Hrdlička was detailed to the Jamestown Exposition, where, with the assistance of Mr. Hendley, he measured and made casts of 2 Eskimo, 2 Panama Indians, and 15 Oglala Sioux. He was in New York in October to arrange for obtaining examples of such ancient human remains as might be discovered in the course of the excavations in Egypt by the Metropolitan Museum of Art, which has generously tendered its cooperation in the matter, although involving extra labor and expense on its part. Subsequently, in company with Dr. J. E. Benedict, he visited Ward's Natural Science Establishment in Rochester, the College of Physicians and Surgeons, the American Museum of Natural History, the Rockefeller Pathological Institute, the Museum of the Brooklyn Institute, and the Wistar Institute of Anatomy, for the purpose of ascertaining the more recent improvements in methods of preparing skeletons.

Technology.—The additions in technology were exceptionally numerous and valuable. Of greatest importance were many models and some full-sized examples of interesting inventions transferred from the Patent Office. The latter include a large number of pistols, revolvers, carbines, rifles, etc., illustrating noteworthy devices which have developed into special systems of firearms now extensively used for military and other purposes. Among these are the Hotchkiss and Krag-Jørgensen magazine rifles, Winchester tubular magazine guns, North guns and pistols, many of which were made for the United States Army in the early part of the last century; the Sharps, Joslyn, Lawrence, Jenks, Spencer, Maynard, Merrill, Burnside, Lindner, Burton, Berdan, and other breech-loading guns. The early foundation inventions, on which the Colt and the Smith & Wesson systems of revolvers are based, are also represented. Some of the other subjects to which the models relate are printing presses, sewing machines, typewriters, electrical inventions, telegraph repeaters, time bank locks, looms, spinning and knitting machinery, etc. The collection of steam machinery models is very important, including several by John Ericsson, who is also represented by his inventions in

gunnery and other classes. Among the models of locomotives are those showing the inventions of Asa Whitney, 1840; M. W. Baldwin, 1842; G. A. Nicholls, 1848; A. Cathcart, 1849; and Ross Winans, 1851. Several inventions of George H. Corliss and William Sellers are likewise illustrated.

Another notable accession, deposited by Dr. Alexander Graham Bell, consists of about 150 pieces of apparatus devised and used by him in his earliest experiments to produce a practical speaking telephone, which resulted in the establishment of the present system of the American Bell Telephone Company, now in general use throughout the world. The U. S. Geological Survey transferred an important collection of typical instruments and appliances such as have been employed by the survey, comprising a number of gradienters, alidadae, alt-azimuth instruments, aneroid barometers, heliotropes, leveling rods, odometers of different forms, two aluminum bench-mark tablets, and ten pieces of apparatus used in the water resource branch of the service, principally for measuring the flow and velocity of streams.

Col. A. H. Russell, U. S. Army, deposited a number of experimental magazine rifles illustrating his inventions, which form the basis of the magazine rifles now in use in the United States Army, together with a number of bronze Spanish mortars and small cannon collected by him in the Philippine Islands. From the Bureau of Ordnance, War Department, there were received three of the latest, or 1906, pattern of army magazine rifles, one United States magazine rifle of the model of 1903, with bayonet, complete, and the component parts of a similar rifle arranged separately to show the construction and operation of this arm. Among the other accessions were 2 English tower flint-lock pistols with brass barrels and bell muzzles of superior workmanship, lent by Mr. Richard Rathbun; 2 boxes of percussion pills, introduced about 1840 and extensively used between the time of the flint-lock and percussion-lock guns, obtained from Davis Brothers, Kent, Ohio; the engine used in Professor Langley's full-size aerodrome, deposited by the Smithsonian Institution; 6 models of Japanese fishing boats, transferred by the Bureau of Fisheries; a model of a canvas canoe of the type now in general use, presented by the Oldtown Canoe Company, Oldtown, Maine; an old bicycle with wooden wheels, contributed by Mr. C. Howard Buckler, of Washington; an old iron-frame bicycle, donated by Mr. William Sturgis Bigelow, of Boston; an old grasshopper bicycle, about 1875 to 1880, presented by Mr. Thomas M. Wilkins, of Washington; a Pomo Indian Tule boat, a survival of the ancient form, made in 1906 by an old Pomo Indian, from the Brooklyn Institute of Arts and Sciences; models of Robert Fulton's steamship Clermont and Fitch's steamboat, by transfer from the State Department; two Starr carbines, duplicate models of the steamboats Savannah and Phoenix, and models of a

primitive American sledge and a farm sled, from the Jamestown Exposition; and part of a self-registering wind vane, devised and used by Prof. James H. Coffin, at Ogdensburg, N. Y., in 1837, donated by Prof. Selden J. Coffin, of Easton, Pa.

Ceramics.—Owing to lack of space, the gallery assigned to the subject of ceramics has also been used for objects of several other classes, such as metal and glass work, lacquers, etc., which it has been customary to mention under the same heading. Miss E. R. Scidmore made a large addition to her loan collection already on exhibition. It consisted of 92 pieces of valuable porcelains, together with some bronze, jade, and lacquer objects, and has been installed in a large wall case on the south side of the gallery. The Korean pottery cases and the Olive Risley Seward collection were rearranged and more completely labeled. Lacking the services of an expert during the past year, but little work was done in the division beyond attending to the safety of the collections and the arrangement of such material as was received.

Graphic arts.—Noteworthy among the additions to the photographic section was a large platinum portrait of Joseph Henry, the first Secretary of the Smithsonian Institution, presented by Mr. F. Gutekunst, of Philadelphia. The transfers from the Patent Office included a daguerreotype camera of 1851, two stereoscopic daguerreotype cameras of 1854, a series of mechanical devices for cleaning and burnishing daguerreotype plates which is probably unequaled elsewhere, and numerous other objects illustrating the history of photography. While the collections of the division have been maintained in good condition, the exhibition series has been rendered practically inaccessible by the overcrowding of the hall, and many objects have had to be withdrawn and temporarily placed in storage. Tools and materials belonging in the division were occasionally used for teaching purposes. A synoptical exhibit from the section of photography was sent to the Jamestown Exposition. It represented the more important epochs in the development of photography, beginning with the first permanent photograph made in any part of the world and the first camera constructed in the United States.

Musical instruments.—An interesting addition to the collection of musical instruments consisted of an example of the old melopeon (harmonium), at one time manufactured by John W. Scott at Cadiz, Ohio, well illustrating the early free reed keyboard instruments. It was presented by the heirs of Mr. Scott through his daughter, Mrs. G. W. Woodborne, of Uhrichsville, Ohio. Miss Delia Curtis, of Windsor, Ontario, contributed an old melodeon with folding legs, revealing the mechanism of instruments of this type. Thirteen musical instruments, donated by Dr. William L. Abbott, are of particular value as opening a new field of study, since they were

mostly collected among the wild tribes of the Malay Islands. The descriptive catalogue of the instruments belonging to the Museum has been continued by Mr. E. H. Hawley, who is also engaged in preparing a list of the musical instruments of all countries. No changes were made in the public installation. In addition to the developmental exhibits in the north hall, some progress was made in assembling those instruments which are used by the national bands of different peoples.

Medicine.—One of the most important accessions of the year was a large collection of Chinese drugs, sent as a gift by Dr. N. Gist Gee, of Soochow University, China. There should also be mentioned a case of dental instruments, containing 218 articles, made and used by Dr. Edward Maynard, one of the eminent early dentists of this country, and deposited in 1907 by Dr. George W. Maynard, of New York. The collection specially prepared for the Jamestown Exposition by the curator, Dr. James M. Flint, U. S. Navy, was incorporated with the exhibits in the Museum on its return to Washington. Its most notable feature was an historical series of portraits of distinguished physicians. Steps have been taken to place this important division on a broader and more practical basis as soon as the necessary space becomes available through the completion of the new building.

History.—The number of permanent accessions received by this division was 36, and of temporary accessions 16, comprising 891 objects. Foremost among the additions was the flag which floated over Fort McHenry, Baltimore, during the bombardment by the British fleet on the night of September 13-14, 1814, and made famous as The Star-Spangled Banner by the verses of Francis Scott Key, an eyewitness of the gallant fight. The flag, retained by Col. George Armistead, the commander of the fort, descended to his grandson, Mr. Eben Appleton, of New York, who has most generously allowed it to be exhibited to the public in the National Museum. This notable relic is so tattered and torn that it has been necessary to protect it with a backing of canvas. It measures 32 feet 10 inches in length and 27 feet 6 inches in width.

A collection of 175 specimens of Lowestoft china and cut glass used at Mount Vernon by General and Mrs. Washington was deposited by Miss Nannie R. Heth, of Washington. Through bequest, the late Henry R. Magruder, of Baltimore, left to the Smithsonian Institution a number of historical and other objects, including a beautiful gold-mounted sword and silver pitcher presented to his father, Lieut. Col. J. Bankhead Magruder, by citizens of Virginia and Maryland. The late Stephen Decatur Smith, of Philadelphia, bequeathed to the Museum a plain gold ring of unusual interest, since it had been given by Richard Somers to Stephen Decatur just before

the former met his heroic death on the *Intrepid* in the war with Tripoli, in 1804. A pistol and 9 military commissions were added to the collection of Gen. George W. Morgan, U. S. Army, by his widow, now residing at Zanesville, Ohio, and a marble top table which had belonged to Thomas Jefferson was received as a gift from Mrs. Frederic C. Brinton, of West Chester, Pennsylvania. Several relics of the Sutton family of Virginia were donated by Mrs. Minnie J. Elliott, of Washington, and Mr. William R. Hawkins, of Eden, Arizona, presented the life-preserver worn by the late Maj. J. W. Powell during his first and most notable exploration of the Green and Colorado rivers and their great canyons. The Field Museum of Natural History, Chicago, contributed 18 pieces of Arctic clothing and other articles used by members of the Greely Relief Expedition. The Rev. J. L. and Mr. Leon L. French, of Washington, deposited a large collection of historical relics, relating mainly to the civil war. The National Society, Colonial Dames of America, added 50 objects to its collection and the National Society, Daughters of the American Revolution, also increased its deposit. A chair from Morro Castle and an Indian beaded cane, relics of the late Sergt. Hamilton Fish of the Rough Riders, who was killed in Cuba, were presented by Mrs. Nicholas Fish, of Washington. From the government exhibits at the Jamestown and Bordeaux expositions a large number of photographs, photographic enlargements, and other historical material were received.

DEPARTMENT OF BIOLOGY.

Accessions of greater or less extent were received from the customary government sources, such as the Bureau of Fisheries, the Bureau of Plant Industry, the Bureau of Entomology, the Biological Survey, and the Forest Service, as explained further on. Among private contributors Dr. W. L. Abbott and Maj. E. A. Mearns, U. S. Army, stand foremost, the former having presented several hundred mammals, birds, and reptiles, mainly from Siak River, Sumatra, and southwestern Borneo; the latter, over 1,000 bird skins, about 250 specimens of bats and other mammals, and many land shells, from the Philippines. Both of these collections contain a large number of new species and some new genera.

This department has also been more or less benefited by recent explorations of the Leland Stanford Junior University in Japan, the Philippine Islands, the Fiji Islands, California, and Mexico; of M. de Rothschild's expedition to East Africa; of the Egyptian Government in the Nile Valley; of Charcot in the Antarctic region; of Prof. J. Fid Tristán and Dr. A. Alfaro in Costa Rica; of Dr. S. E. Meek at Lake Amatitlán, Guatemala; of Mr. William Schaus in Central America;

of Dr. J. C. Thompson, U. S. Navy, among the Tortugas Islands; of the Gulf Biological Station about Cameron, Louisiana; of Dr. Glover M. Allen in eastern Labrador; and of Mr. Owen Bryant and Dr. W. T. Grenfell in Newfoundland. Dr. C. G. Abbot, Director of the Smithsonian Astrophysical Observatory, made a small but valuable collection of marine animals at Flint Island, near Tahiti, while engaged in preparations for observing the solar eclipse of January 3, 1908. Acknowledgments are also due to Dr. Holton C. Curl, U. S. Navy, for his active cooperation in interesting persons in authority to secure material from the Philippine Islands and elsewhere.

Important researches were carried on by the members of the scientific staff as a basis for the classification of the collections, and the publications of the year were especially extensive and valuable. But few sets of specimens were distributed to educational institutions, as little opportunity was found for the separation of duplicates and their labeling and packing for this purpose. The exchanges were also limited for the same reason, consisting mainly of insects, fishes, and marine invertebrates. The number of specimens sent to specialists outside of Washington for study and description was very large.

Mammals.—The extensive collections from Doctor Abbott and Doctor Mearns have been referred to above. Noteworthy among the other additions is a fine specimen of the rare Chinese antelope known as the Takin (*Budorcas*), presented by Mr. Mason Mitchell, American consul at Chungking. It is probably the only complete skin in America. Dr. J. C. Le Hardy, U. S. Army, contributed a skin of the Tamarao or dwarf wild carabao of the Philippine Islands, the first of this rare species to reach the Museum. The head and horns of a specimen of the large feral or wild carabao were presented by Col. E. B. Babbitt, U. S. Army, through Capt. Frank R. McCoy, U. S. Army. From the National Zoological Park 186 animals, chiefly mammals, were received, including many large and important forms, such as the mule deer, pronghorn, Duvaucel's deer, spring buck, lion, puma, Alaska grizzly bear, black bear, California sea lion, Steller's sea lion, moufflon, zebu, and gray kangaroo. A series of 166 antlers and 26 scalps of the American elk from the Jackson Hole region, western Wyoming, was transmitted through the Department of Justice. The antlers are of unusual size and together probably constitute the largest collection from one locality to be found in any museum. They are especially valuable for the study of individual variation in this species of deer. A skeleton of the porpoise known as *Steno rostratus* was purchased. Although skulls of porpoises of this genus are common in the larger museums, only a very few skeletons have been preserved.

In continuation of work done last year, all the skins of insectivores, squirrels, chipmunks, ground squirrels, flying squirrels, Old World

porcupines, and South American octodont rats, as well as the squirrel skulls and bat skeletons, were rearranged, and the cases and trays containing them furnished with typewritten labels. Considerable attention was given to the large and medium-sized skulls, and the alcoholic series, especially the large collection of bats, was much improved in arrangement and labeling. Some 3,200 skulls, chiefly large ones, were cleaned; about 100 large skins were tanned and folded, and 38 smaller ones made over.

A practically complete skeleton of the very rare Baird's beaked whale, *Berardius bairdii*, from California, about 40 feet long, was mounted for the osteological hall. It is probably the only one of its kind exhibited in any museum, and this and another received from the Pribilof Islands represent the largest beaked whales thus far recorded. A Kashmir stag was added to the series representing large game, and 9 small mammals were incorporated in the general exhibition series. It was found necessary to replace the floor in the large wall case on the east side of the south hall, requiring the temporary removal of all the specimens, which were overhauled and renovated.

Dr. F. W. True, head curator of the department, and three assistants made several visits to the Calvert Cliffs, Maryland, in search of fossil cetaceans, of which they obtained a large amount of material, including a nearly complete skeleton of a fossil porpoise, discovered by Mr. William Palmer. Doctor True continued his investigations on the recent North American forms belonging to this group, preparing papers on some of the species, on the Zeuglodont genus *Dorudon* and on the classification of the Cetacea. He has also about completed a manuscript treating of the recent beaked whales. Dr. M. W. Lyon, jr., assistant curator, prepared two papers, one on the horns and systematic position of the American antelope, the other on the mammals collected by Doctor Abbott along the east coast of Sumatra, the latter containing descriptions of 13 new forms. He also began work on Doctor Abbott's latest collection from the Rhio-Linga Archipelago, and southwestern Borneo and nearby islands. A list of the type specimens of mammals preserved in the Museum, including those in the collection of the Biological Survey, was compiled for publication jointly by Doctor Lyon, Mr. W. H. Osgood, and Doctor True.

To Dr. E. A. Mearns, who has begun studies preliminary to a manual of the mammals of the Philippine Islands, was sent a number of fruit bats, and specimens of the Alimiqui (*Solenodon*) were lent to Dr. J. A. Allen, of the American Museum of Natural History, who is working up the Haitian species. Many European mammals were forwarded to Mr. Gerrit S. Miller, jr., who is now at the British Museum, preparing a general work on the European fauna, and some

bats and other small mammals were supplied to Mr. Oldfield Thomas and Mr. Knud Andersen, of the same museum. Dr. Glover M. Allen examined specimens of South American bats, and Dr. H. D. Reed borrowed a number of specimens for use in the preparation of a list of species occurring in the vicinity of Ithaca, New York. Mr. W. K. Gregory, of Columbia University, New York, spent several days at the Museum studying the skulls and teeth of insectivores from an evolutionary standpoint; Mr. E. E. Heller, of the University of California, examined types of mammals of northwestern America; and Mr. J. T. Nichols, of the American Museum of Natural History, devoted some time to making comparisons of porpoise skulls. As in previous years, the naturalists of the Biological Survey made extensive use of the collections.

Birds.—Doctor Abbott and Doctor Mearns, as previously explained, were among the principal contributors of bird skins. Mr. Robert Ridgway, curator of the division, was in Costa Rica from January to May, 1908, on the invitation of Mr. José C. Zeledon, a zealous friend of the Museum, who most generously paid the expenses of the field work, besides personally supervising its details and employing a professional taxidermist. The principal object of Mr. Ridgway's trip was to collect information and specimens for use in the preparation of his manual on the Birds of North and Middle America, now in course of publication by the Museum. He brought back with him about 1,600 specimens.

Costa Rican birds to the number of 154, including topotypes of recently described species, were also obtained from Mr. Outram Bangs, of Boston, partly by gift and partly by exchange. The late Mrs. P. L. Jouy presented about 500 birds, chiefly North American, which had been collected by her husband; Corpl. Robert A. Schroder, U. S. Army, contributed 45 specimens, including the type of a new subspecies of fantail flycatcher, from Mount Malindang, Mindanao Island; Maj. John R. White, a number of specimens from Palawan; and Mr. Owen Bryant, of Cohasset, Mass., a collection of 48 Newfoundland birds, containing two skins of a recently described woodpecker. Twenty-five specimens from southeastern Europe, Morocco, etc., were donated by Mr. J. H. Riley, of the Museum; and 9 specimens from the Chatham Islands, New Zealand, were obtained in exchange from Mr. J. H. Fleming, of Toronto, Canada. Among the latter were examples of several species which have become rare. Mr. E. J. Court, of Washington, presented the type specimen of the heron, *Ardea herodias treganzæ*.

The important task of relabeling the study collection of bird skins progressed satisfactorily, covering the contents of 71 quarter-unit and 19 half-unit cases. This work is now complete for about three-sevenths of the collection. New written labels were supplied for the

petrels, ducks, geese, shore birds, auks, jaegers, skimmers, and terns. All the specimens received during the year, including over 1,100 Philippine birds presented by Doctor Mearns, were also furnished with standard labels. Seventy storage cases were marked with type-written labels, giving their contents by families and genera, and also noting the genera not in the Museum collection. Many imperfectly prepared or damaged specimens of value were made over by the taxidermist, but only a few minor changes were made in the exhibition series.

Mr. Ridgway continued the preparation of the fifth part of the manual of North American birds, giving special attention to the humming birds and woodpeckers. Dr. C. W. Richmond completed a supplement to Waterhouse's index of genera of birds, bringing the subject down from 1901 to 1905, and also added over 3,000 cards to the catalogue of genera and species of birds, on which he has been at work for some time. Mr. Riley, besides assisting Mr. Ridgway, contributed a paper on the West Indian forms of the hawk, *Buteo platypterus*. Work on Doctor Abbott's collection of Malayan birds was continued by Mr. H. S. Oberholser, of the Biological Survey, who also prepared a paper on the kingfishers of the genus *Pelargopsis*, based chiefly on Museum material. Bird skins to the number of 368 were lent for study to 8 ornithologists.

Reptiles and batrachians.—Dr. V. Brazil, director of the Instituto Serumtherapico do Estado de São Paulo, Brazil, transmitted in exchange 13 specimens of snakes, representing 8 species, of which 7 are poisonous. They came from Butantan, and include one recently-described form. An excellent collection of 40 salamanders from North Carolina was purchased. Prof. J. Grinnell, of Pasadena, California, presented a large series of the rare California lizard, *Xantusia vigilis*; and Mr. W. T. Davis, of New Brighton, New York, specimens of the two rare frogs, *Hyla andersoni* and *Rana virgatipes*, from Lakehurst, New Jersey.

Doctor Stejneger's extensive treatise on the reptiles of Japan and the neighboring mainland of Asia, based chiefly on Museum material, was completed and published early in the year. He later continued the study of the reptiles of the Philippine Islands, describing several new species, and conducted investigations regarding the geographical distribution of Asiatic and North American species and the origin of the reptilian fauna of Japan. He also spent some time on a revision of certain North and Central American genera of snakes and batrachians.

Fishes.—The Egyptian Government, at the suggestion of Dr. G. A. Boulenger, of the British Museum, presented through its minister of education an excellent collection of fishes from the River Nile. Numerous types and cotypes of new species from Japan, the Philip-

pine Islands, and other localities, descriptions of which have been published in the Proceedings of the Museum, were received from Stanford University. Mr. A. Alfaro, director of the National Museum of Costa Rica, donated some 40 specimens from Costa Rica, and Dr. J. C. Thompson, U. S. Navy, a fine lot of specimens from the Tortugas Islands. The Bureau of Fisheries transmitted a large and choice collection from Maine, Alaska, and elsewhere, including types and cotypes of new species. A collection of Formosan fishes was purchased.

The number of fishes catalogued during the year was about 20,000, the receipts from the Bureau of Fisheries alone amounting to many thousands. A large proportion of the specimens was transferred to jars and labeled, the type specimens, marked with the customary red labels, being added to the type series. The specimens stored in tanks were overhauled, the duplicates separated out and new lists of the contents prepared. Good progress was made with the card catalogues of both the type and regular reserve series. Mr. B. A. Bean, the assistant curator, continued his study of the fishes of Florida, the large collection from that region being brought together for this purpose. A considerable number of species was added to the faunal list, and some apparently undescribed species were detected. Mr. Bean also spent some time in working up a collection of Costa Rican fishes.

Insects.—The number of insects received during the year amounted to about 53,000, of which the U. S. Department of Agriculture transmitted 600 European parasitic Hymenoptera identified by Mr. O. Schmiedeknecht; about 1,150 named Coleoptera from Europe and Java obtained from Mr. A. L. Montandon; about 4,200 Lepidoptera, 700 mosquitoes, and 3,000 miscellaneous insects collected by Mr. F. Knab; about 2,000 mosquitoes and 4,000 miscellaneous insects secured in Panama by Mr. A. Busck, and about 4,000 Hymenoptera collected near Washington, District of Columbia, by Mr. H. H. Smith. Among the other accessions one of the most important consisted of about 4,770 identified Coleoptera and 750 Hemiptera and Hymenoptera, presented by Mr. F. D. Godman, of London, being a part of the material gathered for the publication *Biologia Centrali-Americana*. Mr. William Schaus added to his previous large donations about 8,200 Lepidoptera, chiefly from Costa Rica. A collection of 275 mosquitoes, including several new species from Panama, was contributed by Mr. A. H. Jennings of Ancon, Canal Zone. The Washington Biologists' Field Club presented about 800 specimens from Plummer's Island, Maryland.

General work on the collection of insects was mainly confined to the Lepidoptera and Coleoptera, a large number of the former and

some of the latter, together with a few specimens of other orders, being transferred to the permanent drawers recently furnished.

The exhibition of insects in the west range of the Smithsonian building was practically completed as far as the available space permitted. During the year the old exhibits of termites and their work and of the Rocky Mountain locust were renovated and replaced in the series, new specimens being added to the former and new labels prepared. An illustration of the work of hymenopterous insects was also begun. A display of local insects, consisting of about 1,000 species of Coleoptera, Orthoptera, and Odonata; contained in 7 unit boxes, forms the beginning of a series intended to cover all orders. Many butterflies and other insects have been collected for this series and will be installed later. Two additional unit boxes contain dragon flies from Japan and beetles from Africa. A series of especially injurious insects was projected, but only the boll weevil and the gipsy moth, together with some 30 species of mosquitoes, including those causing yellow fever and malaria, were placed on exhibition. Considerable work was done on the series representing mimicry, etc.

Dr. L. O. Howard, Dr. H. G. Dyar, and Mr. Frederick Knab continued work on a monograph of the mosquitoes of North and Central America and the West Indies, which was the principal investigation of the year. About 8,700 insects were lent to entomologists in the United States and Europe for study and identification. The entire collection of bumblebees and Psithyridæ was placed in the hands of Mr. H. J. Franklin, of Amherst College, for monographing. Specimens of beetles of the subfamily Aleocharinæ to the number of about 2,500 were sent to Dr. A. Fenyès, of Pasadena, California, who has offered to identify the named species and determine the others generically, and later he will probably describe the new forms. Prof. H. C. Fall, also of Pasadena, received several hundred beetles of the genus *Diplotaxis* of which he is preparing a memoir; and Mr. G. C. Champion, of London, England, a large number of North and Central American weevils of the family Barididæ, for examination in connection with his work on the *Biologia Centrali-Americana*. About 2,000 specimens of Tineid moths were taken to England by Mr. August Busck, for comparison with collections in that country.

Mollusks.—Besides the material elsewhere referred to, there were acquired by exchange about 330 species of Philippine land shells from the Mollendorff and Quadras collections. Of the 1,500 species known from these islands, the Museum has now authentically-named specimens of about 1,330 species. Some 280 species of land shells from Madeira, the Canaries, and other Atlantic islands, including cotypes of species described by Lowe and Wollaston, and type specimens of 20 Mexican and Central and South American species described by Preston, were obtained by purchase. Mr. Charles Hedley

of the Australian Museum, Sydney, New South Wales, sent a collection of Australian species, and Mr. Henry Suter, of Auckland, New Zealand, one of New Zealand species, both consisting largely of cotypes. An excellent lot of land shells from Mexico, including new species, was presented by Dr. Edward Palmer, of the U. S. Department of Agriculture, and some important Californian specimens were received from Dr. R. H. Tremper, of Ontario, California.

Dr. Paul Bartsch, the assistant curator of the division, was detailed to accompany the Bureau of Fisheries steamer *Albatross* to the Philippine Islands, for the purpose of making zoological collections for the Museum. He left Washington on October 9, 1907, and had not returned at the close of the year. While no material has yet been received from this source, it is understood that a large amount, consisting chiefly of marine invertebrates, land shells, and birds, has been obtained. On account of the absence of Doctor Bartsch, the routine work of the division was greatly handicapped. The most important result in this direction was the completion of the labeling and cataloguing of the Jeffreys collection, comprising about 110,000 specimens, concerning which the curator, Dr. William H. Dall, reports as follows:

The event which is most prominent in the operations of the year, is the conclusion of the labeling and registering of the Jeffreys collection of British, Mediterranean, North Atlantic, and North European shells. As a very large proportion of the collection has served as a basis for publications by Turton, Bean, Clark, Jeffreys, Weinkauff, and other more modern authors, the material partakes so much of the nature of types, when the specimens are not the actual figured types (as is the case in a multitude of instances), that the utmost care has been necessary to preserve the identity and the data connected with each lot of specimens. As many abbreviations were used and, in the case of the Porcupine and other deep-sea explorations, often merely the station number was given as locality, the work had to be done with extreme care and very slowly, for the most part when not hurried by other more urgent duties.

This work was begun in 1883 by Miss Nicholson, who completed the registration and arrangement of the land and fresh-water shells; it has been carried on subsequently under my supervision by others, chiefly by Mr. W. B. Marshall, to whose care, assiduity, and perseverance the satisfactory completion of the work is finally due. The entries in the register, representing single lots of specimens from a single locality, number 27,490; the largest number registered and labeled in any one season was about 4,000 lots. Owing to my absence in the field during some years, nothing was done, as I have supervised every stage of the work personally. The collection occupies the equivalent space in drawers afforded by seven standard table cases, and contains approximately 110,000 specimens.

The further work upon the collection involves writing slips indicating the species present for each half-unit tray, the cards indicating the genera in each unit drawer, and the card catalogue of species contained in the collection with reference to the case and drawer in which they may be found. This work, now that the registration of the species and data is safely completed, involves comparatively little difficulty and no more than the ordinary care required in handling any part of the study collection.

Doctor Dall completed a work on the mollusks and brachiopods collected by the Bureau of Fisheries steamer Albatross in the eastern Pacific Ocean under the supervision of Dr. Alexander Agassiz, and also several papers on new mollusks obtained by the steamer Albatross in 1906 and by correspondents on the Pacific coast. The paper on Pyramidellidæ by Doctor Dall and Doctor Bartsch, mentioned in the report of last year, was printed and distributed.

Marine invertebrates.—In the division bearing this title, which comprises the several groups of invertebrate animals other than insects and mollusks, an especially noteworthy event was the receipt from Prof. A. E. Verrill, of Yale University, of the greater part of the collection which has been in his custody for the past twenty years and more. As explained in the last report, this material was mainly derived from the marine explorations of the U. S. Fish Commission on the New England coast between 1871 and 1887, and represented all classes of marine invertebrates. Its study and description were intrusted to Professor Verrill, who was to receive the first set of duplicates for his services in lieu of a salary. His investigations are still incomplete, and the division of specimens effected during the year was chiefly confined to those that had been named. The two assistant curators of the division were kept fully occupied with this work at New Haven from April to November, 1907, and the sorting and arrangement of the specimens after their return extended through several months. The transfer of this material to Washington has enriched the collections in both this division and that of mollusks to a remarkable extent. The records show that the number of specimens received was about 73,000, comprised in 18,315 lots, while 654 species, of which 191 are mollusks, were added to those previously received from the investigations of the Fish Commission. In this latter number are included the types or cotypes of 355 species, of which 176 are mollusks. To simply label and record this vast collection required the services of two expert cataloguers for seven and one-half months.

The Bureau of Fisheries transmitted large numbers of holothurians, sea urchins, starfishes, crinoids, and corals from the Hawaiian Islands, Alaska, California, and the northwestern Pacific Ocean, and parasitic copepods and annelids from Japan. Among these were the type specimens of many new species. A collection of Japanese crinoids, containing 131 specimens and the types of three new species, was purchased of Mr. Alan Owston and deposited in the Museum by the Honorable Frank Springer, of Las Vegas, New Mexico. Ninety-five specimens of crinoids, representing 15 species, were obtained from the Museum of Comparative Zoology in exchange, and 41 specimens of isopods, comprising 13 species, from East Africa and

the Antarctic Ocean were presented by the Museum of Natural History of Paris, through Prof. E. L. Bouvier.

The absence of the assistant curators in New Haven for so long a period greatly curtailed the amount of scientific work accomplished. Two papers descriptive of fossil crabs from California and fresh-water crabs from East Africa were prepared by Miss M. J. Rathbun. Work on the isopods was continued by Dr. Harriet Richardson, who, besides identifying the specimens returned from New Haven, described the species *Leidya distorta* from Bermuda and reported on a second lot of isopods from the Antarctic Ocean, collected by the French Charcot expedition. Mr. Austin H. Clark, of the Bureau of Fisheries, continued work in the laboratory of the division on a memoir covering the general collection of crinoids, and also completed for publication 5 special papers on the group. Dr. Walter K. Fisher, of Stanford University, spent about four months at the Museum and visited the Museum of Comparative Zoology and the Yale University Museum for the purpose of examining type specimens and literature in connection with the report which he is preparing on the Museum collection of Pacific starfishes sent him a year ago.

About 2,900 lots of marine invertebrates were sent to 18 specialists for study and identification, mainly as follows: The entire collection of sessile barnacles, comprising 1,202 lots, to Dr. H. O. Pilsbry, of Philadelphia, who will report on the group for publication by the Museum; 711 lots of ophiurans to Dr. H. L. Clark, of the Museum of Comparative Zoology, for use in the preparation of a work on the ophiurans of the Pacific Ocean north of latitude 35° N.; 141 lots of medusæ and 184 lots of plankton containing medusæ from the Pacific Ocean, to Dr. H. B. Bigelow, of the same museum; and 211 vials of larval crustaceans from the New England coast, to Dr. R. P. Bigelow, of the Massachusetts Institute of Technology. The pedate holothurians which have been in the possession of Prof. C. L. Edwards, of Trinity College, Hartford, Connecticut, except the specimens of the genus *Cucumaria* on which he is still at work, have been returned to the Museum.

The helminthological collection, in charge of Dr. Ch. Wardwell Stiles, of the Public Health and Marine-Hospital Service, and Dr. B. H. Ransom, of the Bureau of Animal Industry, has attained a position of much practical importance, since it now contains a large amount of material resulting from government investigations on the diseases of man and of wild and domestic animals. The specimens have been mainly obtained through the two bureaus mentioned and the Bureau of Fisheries. The additions from the Marine-Hospital Service during the year included specimens obtained during the plague investigation in San Francisco; from Manila, forwarded by Asst. Surg. P. E. Garrison, U. S. Navy, and from physicians in .

different parts of the country. The most important contribution was *Sparganum proliferum*, a parasite of man, sent by Dr. H. Gates, of Manatee, Florida. The Bureau of Animal Industry supplied a large variety of parasites from different parts of the United States, the island possessions, India, China, Anam, Canada, Mexico, and Panama. Many specimens were also obtained at autopsies of animals which had died at the National Zoological Park.

Of investigations bearing more or less directly on the collections in the Museum, it may be said that the studies by Doctor Stiles have related chiefly to the question of child labor in the South as influenced by the presence of the hookworm disease. He described the *Sparganum proliferum*, above mentioned, and reexamined the original specimens of *Filaria restiformis* Leidy (1880), which he finds not to belong to the genus *Filaria* but to be a member of the family Mermithidae. In conjunction with Dr. Joseph Goldberger, he published on two new species of trematodes, *Homalogaster philippinensis* from the Philippine Islands, and *Agamodistomum namus* from Africa, and on a reexamination of the original specimen of *Tenia saginata abietina*. These two authors have also completed a manuscript on a number of trematodes of the family Paramphistomidae. Doctor Ransom continued researches on the nematodes parasitic in ruminants, and, on the basis of Museum material, described the following new species: *Trichostrongylus capricola*, *Ostertagia trifurcata*, *O. marshalli*, *O. occidentalis*, and *Cooperia pectinata*, all from America. The genera *Ostertagia* and *Cooperia* are also new. A new species of tape worm, *Cettotenia mosaica*, from rabbits in California, was described by Mr. M. C. Hall, of the Bureau of Animal Industry.

Comparative anatomy.—Several thousand entries of skeletons in the mammal record books were incorporated in the osteological catalogue. A complete card catalogue of the skulls and skeletons of turtles was made, and this collection was relabeled and arranged in pasteboard boxes. It became necessary to remove the material which had been stored behind the wall cases in the south hall, in order to permit of fireproofing. A large series of rough skeletons stored in one of the outside buildings, including large numbers of the bones of East Indian mammals and birds presented by Doctor Abbott, was listed, transferred to specially made metal boxes, and placed in the Museum building for greater safety. The three large skeletons of Baird's beaked whale in the possession of the Museum were brought together and measured, and one selected to mount for the exhibition series, as elsewhere described.

Plants.—The total number of plants received during the year was about 25,000. The additions from the U. S. Department of Agriculture comprised 2,458 specimens from the Bureau of Plant Industry, 919 from the Forest Service, 247 from the Biological Survey,

and 83 from the Office of Experiment Stations. Among the purchases were 305 Mexican plants from Dr. C. G. Pringle and 769 from Dr. Edward Palmer, 400 Guatemalan plants from Baron Henry von Turckheim, 499 Californian plants from Mr. A. A. Heller, and 544 plants of the northeastern United States and Canada from Mr. M. L. Fernald, Mr. W. W. Eggleston, Mr. J. Macoun, and Mr. W. H. Blanchard. The herbarium of Mr. J. W. Toumey, containing 887 specimens of cacti and many types, was also purchased. The principal acquisitions of American plants by exchange consisted of about 2,000 specimens, including many from the West Indies and some living specimens of cacti and Crassulaceæ, from the New York Botanical Garden; 636 Texan plants collected by Lindheimer, one of the older American botanists, from the Missouri Botanical Garden; 206 specimens from Indiana and Illinois, from Mr. V. H. Chase; 349 specimens from Nevada, from Mr. P. B. Kennedy; 300 specimens from Illinois and Wisconsin, from Mr. F. C. Gates; and 280 specimens from Guatemala, from the Ohio State University. The foreign exchanges were mainly conducted with the Royal Botanical Museum, Berlin; the University of Lausanne, Switzerland; and the Albany Museum, Grahamstown, South Africa. The associate curator, Dr. J. N. Rose, collected about 2,000 dried specimens and 500 living plants while engaged in field work in the southwestern United States and northern Mexico.

The rearrangement of the herbarium on the system of Engler and Prantl was completed during the year. The genera of flowering plants have been given serial numbers corresponding with those of Della Torre and Harm's Genera Siphonogamarum, and an alphabetical reference card catalogue of this work was prepared. There were stamped and incorporated in the permanent series 12,379 specimens, making the total number so disposed of since the return of the herbarium to the Museum 332,361. The number of specimens mounted was 10,336. The additions to the stack consisted of 15 wooden unit cases, 3 half-unit cases and 1 steel case, comprising 420 pigeonholes and increasing the total number of the latter in use to 10,858.

The investigations conducted were mainly in continuation of those of the previous year—Dr. J. N. Rose on the cacti, Mr. W. R. Maxon on ferns, Mr. E. S. Steele on the genus *Laciniaria*, and Mr. J. H. Painter on water lilies. Mr. Maxon, on the invitation of the director of the New York Botanical Garden, edited the manuscript on ferns left by the late Dr. L. M. Underwood. The director and three other botanists of the New York Botanical Garden spent some time at the herbarium, Dr. N. L. Britton working with Doctor Rose on the cacti, Dr. J. K. Small examining material in the preparation of a

work on the flora of North America, Dr. P. A. Rydberg studying the Rosaceæ and Mr. Percy Wilson the Rutaceæ. The desert plants of the southwestern United States were the subject of investigation by Doctor and Mrs. Volney Spaulding, of Tucson, Arizona, and plants of California by Miss Alice Eastwood, of the California Academy of Sciences. Mr. W. W. Eggleston, of Rutland, Vermont, made several visits to examine specimens of Crataegus. The botanists of the Department of Agriculture made constant use of the herbarium.

About 2,800 specimens, the largest number since 1904, were lent to botanists outside of the government service, both in the United States and Europe. The principal sendings were as follows: One thousand and sixty-seven specimens of Nyctaginaceæ to Mr. Paul C. Standley, of the New Mexico College of Agriculture; 440 ferns of the genus *Dryopteris* to Mr. C. Christensen, of the Botanical Museum, Copenhagen; 190 specimens of the genus *Wissadula* to Prof. R. E. Fries, of the Botanical Museum, Upsala; and 153 specimens, chiefly Colombian Compositæ, to Dr. J. M. Greenman, of the Field Museum of Natural History.

DEPARTMENT OF GEOLOGY.

The total number of geological and paleontological specimens acquired during the year was nearly 33,000, comprised in 147 accessions. Twenty lots of specimens were lent to investigators for study, 149 sets of duplicates were distributed to educational establishments, and 15 lots of duplicates were used in making exchanges. Twenty-two papers by members of the staff and by others descriptive of material belonging in the department were published. They are cited in the bibliography. As explained elsewhere, the division of stratigraphic paleontology was separated into three divisions, corresponding with former sections, as follows: Invertebrate paleontology, vertebrate paleontology, and paleobotany.

Systematic and applied geology.—The most important accessions to this division were as follows: By transfer from the U. S. Geological Survey, specimens of rocks from the Rockland quadrangle, Maine, the Austin and Brackett quadrangles, Texas, and the Redding quadrangle, California, and rocks and ores from the Coeur d'Alene district, Idaho; as gifts from Mr. Charles P. Robbins, the Southern Railway, and the Utah Antimony Company, respectively, examples of tin ores from Spokane, Washington, of copper ore from Ducktown, Tennessee, and of antimony ores from Utah.

No noteworthy changes were made in either the exhibition or study series. The former is as extensive as the space will permit, and is fully catalogued and labeled. The dust occasioned by the rebuilding of the roofs rendered necessary the thorough cleaning and overhaul-

ing of the exhibition and many of the storage cases. Work on the reserve collection has been continued and been brought well up to date, some 3,390 cards and labels having been prepared.

Dr. George P. Merrill, head curator of the department, made an extensive study of Meteor Crater, Canyon Diablo, which he began by a visit to the locality in May, 1907, under a grant from the Smithsonian Institution. His investigations tend to show that the crater was formed, not by volcanic explosion, but by impact, and presumably from that of a giant meteorite. The results so far obtained have been published.

Mineralogy.—Among the more valuable additions to the collection of minerals were specimens of the rare zeolite, edingtonite, from Bolet, Sweden, and of the rare calcium copper vanadate, calciovolvothite, from Paradox Valley, Colorado; a fine crystal of tapiolite, a columbo-tantalate, from Chanteloube, France; an excellent example of hydromagnesite from Alameda County, California; and specimens of meteoric iron from Williamstown, Kentucky; Ainsworth, Nebraska; and Crab Orchard, Rockwood County, Tennessee. The meteors were in part presented by Mr. E. E. Howell, of Washington.

The condition of the reserve collection has been much improved through the identification of many specimens and the writing of several thousand labels and catalogue cards. The exhibition collection has been maintained in good condition, and a new series of descriptive labels is in course of preparation.

Mr. Wirt Tassin, assistant curator of mineralogy, aided in the study of the materials from Meteor Crater, and made ten analyses of meteoric chromites, which represent over 65 per cent of the known analyses. He also investigated the minerals contained in certain sands from the vicinity of Norris, Montana, which resulted in the discovery of the rare thorium-uranium mineral, thorianite, and also of xenotime, zircon, monazite, and spinel. Numerous demands were made upon this division for chemical examinations for other branches of the Museum.

Invertebrate paleontology.—Among the accessions received by this division were several of exceptional importance. The Smithsonian Institution made two very noteworthy deposits. The first consisted of the celebrated Gustav Hambach collection of fossil invertebrates, together with some specimens of fossil plants and vertebrate remains, containing many types and a number of specimens from the Prout and Shumard collections which for years were supposed to be lost. The second was the Gilbert collection of Niagaran fossils from northern Indiana, which formed the basis of Doctor Kindle's studies on the subject, and, owing to the scarcity of fossil-yielding localities in this region and the number of types represented, is unique and practically impossible of duplication. Much material was transmitted by

the U. S. Geological Survey, the largest and most valuable series comprising 20 drawers of Paleozoic graptolites, the study of which had recently been completed for publication by Dr. Rudolph Ruedemann, of the New York Geological Survey. Among the types described were some presented to the Museum by the University of Colorado. Through the medium of exchange about 2,500 specimens, representing 419 species, of European Paleozoic trilobites and brachiopods were received from Dr. F. Krantz, of Bonn, Germany; 470 species of various groups from Mr. J. Vaquez, of Pantin, France; and 500 specimens of Tennessee Ordovician fossils from Mr. Manly D. Barber, of Knoxville. A fine slab of *Urintacrinus*, deposited by the Hon. Frank Springer and described in a paper soon to be published, constituted a most important addition to the exhibition series.

The Smithsonian field party, under Secretary Charles D. Walcott, which made extensive geological explorations in British Columbia and Idaho during the summer of 1907, brought back important collections of Cambrian fossils, the study of which is being conducted by Doctor Walcott. Dr. R. S. Bassler, curator of the division, spent a part of July and August, 1907, in making collections especially from Niagaran strata in western Tennessee. During September and a part of the following May and June he was detailed to conduct investigations in Virginia under the U. S. Geological Survey. A general study of the Niagaran rocks of the Mississippi Valley occupied his attention during the last three weeks of June. Some 5,000 specimens of fossil invertebrates were secured during these surveys.

Work on the Springer collection was continued, and the Gilbert and Nettelroth collections were recorded and installed, the total number of specimens catalogued being 17,668. Two hundred and fifty-nine standard drawers and 110 boxes of unworked material were removed from storage and their contents placed in condition for examination. The Hambach collection was unpacked and arranged, but the specimens have not yet been catalogued. Doctor Bassler completed studies on the Nettelroth collection, the formation of geodes, the Niagaran strata of west Tennessee, a revision of the *Beyrichiidae*, the cement materials of western Virginia, and the lower Devonian Ostracoda and Bryozoa of Maryland. He also continued his work on the American Cambrian Ostracoda.

Vertebrate paleontology.—The most notable accession in vertebrate paleontology was one received from the American Museum of Natural History in partial exchange for the Cope collection, as arranged some time ago. It contains many rare species from various horizons in the United States and South America. Of primary interest are a fine skull, including the jaws, of *Urintatherium*, several good specimens of Oligocene mammals, and many rare Eocene mammals. The

Gustav Hambach collection included a number of fossil fishes, reptiles, and mammals. The collection obtained by Mr. C. W. Gilmore on the Smithsonian expedition to Alaska during the summer of 1907 and deposited in the Museum contains several fragmentary specimens representing fossil species of the mastodon, bison, musk ox, caribou, beaver, etc. The most important find was a nearly complete skull of a new species of *Ovibos*, which Mr. Gidley has described under the name *Ovibos yukonensis*. A fossil turtle from the Kansas chalk is also worthy of mention.

The *Teleoceras* remains, so extensively represented in the Marsh collection, have been completely overhauled and cleaned, and from them has been selected sufficient material for the purposes of the National Museum, together with a fine lot of duplicates for exchange. This work was greatly delayed by Mr. Gilmore's absence in Alaska and the time subsequently consumed in the writing of his report. Aside from the above, Mr. Gilmore has devoted his attention mainly to the preparation of *Camptosaurus* material, which has progressed as rapidly as could be expected, and he feels confident of being able to mount one and perhaps two fairly complete exhibition specimens. The working out of the very large collection of *Stegosaurus* material has also been begun. Some 2,500 catalogue cards were prepared.

Mr. J. W. Gidley has studied and described the Miocene and Pliocene horses of North America, two new species of Pleistocene ruminants, a new species of fossil deer from the Mascall formation of Oregon, a new species of multi-tuberculate mammal, a new species of Eocene mammal, a new species of *Ovibos*, the position and mechanics of limb and foot structure of sundry small mammals, and a small collection of fossil mammals from the Miocene of Nevada.

There are now cleaned and ready for mounting skeletons of a small-horned rodent, *Epigaulus hatcheri*, from Kansas; a creodont mammal, *Sinopa*, from the Bridger Basin of Wyoming; a shortlimbed rhinoceros, *Teleoceras fossiger*, from Kansas; two species of the Jurassic reptile, *Camptosaurus*; a fossil cetacean, *Zeuglodon cetoides*; at least one *Titanotherium*, and a Lower Eocene carnivore, *Hoplophonius*. The type specimen of *Ceratosaurus nasicornis* can also be prepared for mounting in relief with a comparatively small amount of labor. In addition, it is expected that in another year or eighteen months the work of cleaning the bones of *Stegosaurus ungulatus*, a reptilian form ranking in grotesque character with the *Triceratops*, will be completed.

Paleobotany.—The principal accession in this division consisted of about 235 specimens of fossil plants, forming a part of the Gustav Hambach collection, previously referred to. It contains 16 types from Florissant, Colorado, described by W. C. G. Kirchner in the

Transactions of the St. Louis Academy of Science, Volume VIII, 1898. The entire exhibition and a large part of the study series were overhauled, partly rearranged, and many of the specimens reduced in size by careful trimming. Much progress was made in the numbering of specimens and the preparation of the card catalogue. The investigations carried on were almost entirely limited to the work of the paleobotanists of the Geological Survey. Dr. A. C. Peale was detailed for service in connection with the explorations of the Geological Survey in Montana during the summer of 1907.

DISTRIBUTION AND EXCHANGE OF SPECIMENS.

Of the regular sets of duplicate specimens prepared for educational purposes 152 were distributed during the year, as follows: Sixty-one of nonmetallic minerals and ores, 53 of fossil invertebrates, 24 of rocks, 8 of minerals, 3 of weathered rocks, and 3 of marine invertebrates. The total number of specimens included in these sets was 8,471, besides which nearly 3,500 specimens were sent out in special sets.

Including the material to be worked up for publication by the Museum, there were placed in the hands of specialists not officially connected with it, for study, 6,215 specimens from the department of biology, 2,844 from the department of geology, and 29 from the department of anthropology, a total of 9,088 specimens.

In carrying on exchanges with scientific institutions and individuals 13,993 duplicate specimens were used. Of this number 1,630 were geological, 153 anthropological, and 12,210 zoological and botanical. An idea of the extent of the Museum's relations in this regard may be obtained from the following list of establishments and individuals abroad with which exchanges were made during the year. Among the establishments were the British Museum of Natural History, London, the Royal Botanic Gardens, Kew, and the Hancock Museum, Newcastle-upon-Tyne, England; the Museum of Natural History, Elbeuf, France; the Königlaches Botanisches Museum, the Königlaches Zoologisches Museum, Berlin, and the Städtisches Museum für Völkerkunde, Leipzig, Germany; the Jardin Botanique de l'Etat, Brussels, Belgium; the Zoological Museum, Copenhagen, Denmark; the Naturhistoriska Riksmuseum, Stockholm, Sweden; Teyler's Museum, Haarlem, Netherlands; Botanical Museum of the University of Lausanne, Switzerland; the Royal Zoological Museum, Turin, Italy; Royal Museum of Natural History, Vienna, Austria; the Hungarian National Museum, Budapest, Hungary; the Royal Botanic Garden, Calcutta, India; the Albany Museum, Grahamstown, Cape Colony, South Africa; the Waihi School of Mines, Auckland, New Zealand; the Instituto de Manguinhos, Rio de Janeiro,

and the Instituto Serumtherapico do Estado de Sao Paulo, Brazil; the Hope Gardens, Kingston, Jamaica; Queen's University, Kingston, Canada; and the Estacion Central Agronómica, Santiago de las Vegas, Cuba.

Among the individuals may be mentioned: Mr. Edward Lovett, Croydon, England; Mr. Henri Douville, Paris, Mr. A. Duchaussoy, Caudebec lés Elbeuf, Seine Inférieure, and Mr. J. Vaquez, Perreux, Seine, France; Dr. F. S. Archenhold, Treptow-Sternwarte, Treptow bei Berlin, Mr. A. Kneucker, Karlsruhe, Mr. F. Krantz, Bonn, and Mr. Curt Morhart, Ensfield, Middle Franconia, Germany; Mr. O. M. Reuter, Åbo, Finland; Mr. Robert E. Fries, Stockholm, Sweden; Mr. Friedrich Hendel, Vienna, Austria; Mr. Michele Guadagno and Mr. Ernesto Monaco, Naples, Italy; Dr. Casimir de Candolle, Geneva, and Mr. Henry Volkart, St. Gallen, Switzerland; Mr. F. Baker, Richmond, Victoria, and Mr. W. H. D. Le Souëf, Melbourne, Australia; Dr. Eugenio F. Giacornelli, La Rioja, Argentina, and Señor Juan Tremoleras, Montevideo, Uruguay, South America; Dr. Carlos Renson, San Salvador, Central America; Mr. Luis Brooks, Santiago, Cuba.

MISCELLANEOUS.

VISITORS.

The number of visitors ^a to the National Museum building during the year 1907-8 was 299,659, a daily average of 954, and to the Smithsonian building, 237,182, a daily average of 755.

The following tables show, respectively, the attendance during each month of the past year, and for each year beginning with 1881, when the Museum building was first opened to the public.

Number of visitors during the fiscal year 1907-8.

Year and month.	Museum building.	Smithsonian building.	Year and month.	Museum building.	Smithsonian building.
1907.			1908.		
July	28,790	21,296	January	13,994	9,788
August	52,343	39,204	February	13,606	9,262
September	46,135	39,861	March	18,700	13,926
October	33,781	29,882	April	27,698	21,248
November	18,860	17,248	May	17,307	13,690
December	18,896	10,894	June	14,546	10,983
			Total	299,659	237,182

^a These figures are based on an attendance during 314 days in the year, on which the buildings were open to the public.

Number of visitors to the Museum and Smithsonian buildings since the opening of the former in 1881.

Year.	Museum building.	Smithsonian building.	Year.	Museum building.	Smithsonian building.
1881.....	150,000	100,000	1895-96.....	186,565	103,650
1882.....	167,455	152,744	1896-97.....	229,606	115,769
1883.....	202,188	104,823	1897-98.....	177,254	99,273
1884 (half year).....	97,661	45,565	1898-99.....	192,471	116,912
1884-85.....	205,026	105,993	1899-1900.....	225,440	133,147
1885-86.....	174,225	88,960	1900-1901.....	216,556	151,563
1886-87.....	216,562	98,552	1901-2.....	173,888	144,107
1887-88.....	249,665	102,863	1902-3.....	215,307	181,174
1888-89.....	374,813	149,618	1903-4.....	220,778	143,988
1889-90.....	274,324	129,894	1904-5.....	235,921	149,380
1890-91.....	286,426	111,629	1905-6.....	210,886	149,661
1891-92.....	269,825	114,817	1906-7.....	210,107	153,591
1892-93.....	319,930	171,188	1907-8.....	229,650	237,182
1893-94.....	195,718	103,910		6,274,000	3,569,551
1894-95.....	201,744	105,638			

CONGRESSES AND MEETINGS.

The Seventh International Zoological Congress was held in Boston, Massachusetts, from August 19 to 23, 1907, under the presidency of Dr. Alexander Agassiz. The Smithsonian Institution was officially represented by Dr. Theodore Gill, Dr. William H. Dall, and Dr. Richard Rathbun, and the National Museum by Dr. Frederick W. True, head curator of biology, Dr. Leonhard Stejneger, curator of reptiles and batrachians, and Dr. Harrison G. Dyar, of the division of insects. Several papers were read by members of the Museum staff, as follows: Dr. L. O. Howard, curator of insects, The recent progress and present condition of economic entomology; Doctor True, On the correlation of North American and European genera of fossil cetaceans; Doctor Gill, Systematic zoology, its place and functions, and The incongruity of inland and marine faunas; Doctor Dyar, The distribution of mosquitoes in North America; Dr. Marcus W. Lyon, jr., assistant curator of mammals, The distribution of bats in the zoogeographical regions; Dr. B. W. Evermann, curator of fishes, The origin of the golden trout of the Southern High Sierra; Doctor Dall, curator of mollusks, Deep sea distribution of the molluscan fauna of the northwest coast; Dr. Paul Bartsch, assistant curator of mollusks, A study in distribution based on the family Pyramidellidae of the west coast of America; Dr. T. W. Vaughan, custodian of madreporarian corals, Summary of results obtained from a study of the recent Madreporaria of the Hawaiian Islands and Laysan. Organizing secretaries were selected from members of the staff, as follows: Dr. Leonhard Stejneger for

the section of zoogeography, Dr. L. O. Howard for the section of entomology, and Dr. Ch. Wardell Stiles, custodian of the helminthological collections, for the section of applied zoology.

After the close of the meeting in Boston many members of the Congress, especially from abroad, were entertained at other places, and among them Washington, which they visited during the 3d, 4th, and 5th of September. The Museum building was opened for their private inspection on the last evening, when an informal reception was also tendered them by the Smithsonian Institution.

Dr. Paul Haupt, associate in historic archeology, will represent the National Museum at the Fifteenth International Congress of Orientalists, to be held in Copenhagen, Denmark, in August, 1908. Dr. Arnold Hague, of the U. S. Geological Survey, has also been appointed to serve in a like capacity at the centenary celebration of the Geological Society of London, which will take place in September, 1908.

Accommodations in the Smithsonian building were accorded to the National Academy of Sciences for the business sessions of the annual meeting, from April 21 to 23, 1908, while one of the exhibition halls in the Museum building was especially fitted up for the open sessions, at which many scientific papers were read.

CORRESPONDENCE.

The correspondence of the Museum is increasing each year, since, besides its relations with practically all of the scientific and many of the art establishments throughout the world, the Museum is called upon by the public generally for the identification of specimens and the answering of inquiries. As would naturally be expected from the character of the requests, this work encroaches heavily upon the time of the scientific staff, on which dependence must be had for the information required. The number of specimens received for identification amounts to several thousand every year.

The office of correspondence also attends to the distribution of the publications of the Museum, of which about 50,000 copies of volumes and separates were sent out during the year to institutions and individuals on the regular mailing list and about 10,000 copies in compliance with special requests.

PUBLICATIONS.

There were issued by the Museum during the past year 8 volumes and 6 parts of volumes. The Annual Report for 1907, published in December, was restricted, like those of the two preceding years, to an administrative statement of the operations of the Museum. Volume 32 of the Proceedings, issued in July, 1907, contained 51 papers,

all of which had been previously distributed in the form of separates. In June, 1908, volume 33 of the Proceedings, containing 35 papers, was published, 700 copies of each paper being delivered in pamphlet form, instead of 600, as in previous years. This increase will allow a somewhat wider distribution than heretofore. In addition to those already mentioned, 23 "separates," forming part of volume 34 of the Proceedings, were published and distributed during the year.

Of bulletins, 5 volumes were issued, as follows: No. 50, volume 4, Birds of North and Middle America, by Robert Ridgway, containing 973 pages of text and 34 plates, and descriptive of the thrushes, wren-thrushes, mockingbirds, starlings, weaver-birds, larks, sharpbills, tyrant flycatchers, manakins, and chatterers; No. 58, The Herpetology of Japan and Adjacent Territory, by Leonhard Stejneger; No. 59, Recent Madreporaria of the Hawaiian Islands and Laysan, by T. Wayland Vaughan; No. 60, The Barnacles (Cirripedia) Contained in the Collections of the U. S. National Museum, by Henry A. Pilsbry, of the Philadelphia Academy of Natural Sciences; and No. 61, Variations and Genetic Relationships of the Garter Snakes, by Alexander C. Ruthven, of the University of Michigan.

The "parts" of volumes consisted of the following numbers in the series of Contributions from the U. S. National Herbarium: Volume X, part 5, Report on the Diatoms of the Albatross Voyages in the Pacific Ocean, 1888-1904, by Albert Mann, of the U. S. Department of Agriculture; Volume X, part 6, The Cyperaceæ of Costa Rica, by the late Prof. C. B. Clarke; Volume X, part 7, Studies of Tropical American Ferns, No. 1, by William R. Maxon; Volume XII, part 1, Catalogue of the botanical library of John Donnell Smith, presented in 1905 to the Smithsonian Institution, compiled by Alice Cary Atwood; Volume XII, part 2, containing The Lecythidaceæ of Costa Rica, and Tonduzia, a New Genus of Apocynaceæ from Central America, by H. Pittier de Fábrega; and A Collection of Plants from the Vicinity of La Guaira, Venezuela, by J. R. Johnston; Volume XII, part 3, Types of American Grasses, by A. S. Hitchcock.

In addition to the foregoing, 17 papers describing Museum material, and for the most part written by members of its staff, were published in the Quarterly Issue of the Smithsonian Miscellaneous Collections. They may be classified as follows: Archeology, 1; mammals, 1; fishes, 1; insects, 1; marine invertebrates, including mollusks, 4; botany, 4; geology, 5. The Secretary also granted permission for the printing elsewhere than in the publications of the Institution and Museum of 10 papers by members of the staff.

The following is a classification by subjects of the 230 papers cited in the bibliography: Administration, 1; ethnology, 5; archeology, 3;

physical anthropology, 1; mammals, 22; birds, 11; reptiles and batrachians, 8; fishes, 25; insects, 41; mollusks, 24; other marine invertebrates, 42; helminthology, 9; plants, 12; geology and mineralogy, 6; fossils, 14; fine arts, 1; biography, 3; bibliography, 2.

In addition to the editorial work in connection with the publications, the editor also has charge of the other printing for the Museum, including labels, blanks, etc., and of the binding, all of which is done by the Government Printing Office.

LIBRARY.

The Museum library has continued to receive from Prof. O. T. Mason and Dr. C. A. White many gifts of scientific publications which are of great value in completing sets and filling in the series of authors' separates, and Mr. William Schaus has again added materially to the sectional library of the division of insects. Dr. Charles W. Richmond has presented another installment of books and pamphlets, including many of the Thunberg dissertations, which are for the most part rare and difficult to obtain and of which he is endeavoring to complete the set. The library has also been benefited by the plan adopted by the International Catalogue of Scientific Literature of sending to authors lists of their scientific writings that have been entered in the catalogue and requesting any that have not been cited, whereby many separates from periodicals, journals, etc., have been acquired.

There are now in the library 33,564 volumes, 52,112 unbound papers, and 108 manuscripts. The additions during the year consisted of 3,257 books, 4,470 pamphlets, and 247 parts of volumes. One thousand books, 2,257 complete volumes of periodicals, and 4,056 pamphlets were catalogued, and 1,086 books were sent to the Government Printing Office for binding. The number of books, periodicals, and pamphlets borrowed from the general library was 29,242, while the number assigned to sectional libraries was 10,314.

PHOTOGRAPHY.

The photographic laboratory, which is one of the best equipped for its purpose in the country, has for its object the preparation of illustrations for the publications of the Museum, for the manuscript records of important collections, and for the exhibition halls, and of copies of plans relating to details of construction in connection with the buildings, furniture, etc. The number of negatives made during the year was 1,328; of silver and velox prints, 3,615; of blueprints, 6,447; and of bromide enlargements, 28. Seventy-four rolls of films taken in the field were also developed.

EXPOSITIONS.

Jamestown Ter-Centennial Exposition.—The participation by the Smithsonian Institution and National Museum in the Jamestown Exposition, which opened on April 26, 1907, was outlined in the last report. The exhibit, prepared and maintained under the direction of Mr. W. de C. Ravenel, who represented these establishments on the government board, was, in accordance with the act of Congress, designed to illustrate the aboriginal, colonial, and national history of America, and, notwithstanding the small allotment granted, it proved an especially noteworthy feature. Although the exposition closed on November 30, the dismantling of the exhibits was, by direction of the President, deferred until January 18, 1908, but by February 10 all the objects belonging to the Institution and Museum had been shipped to Washington.

Besides the material taken from the existing collections, many additional groups and objects were specially prepared or purchased for the exposition, and these have since been incorporated in the collections of the Museum. Among them was a group of 14 white and Indian figures representing a trading expedition by Capt. John Smith at the mouth of the James River in 1607, designed by Mr. William H. Holmes, and executed under his direction by Mr. H. W. Hendley and Mr. U. S. J. Dunbar. Another exhibit, prepared under the supervision of Dr. James M. Flint, U. S. Navy, curator of medicine, was a collection illustrative of the history of medicine in America by means of photographs of distinguished medical men, with information regarding their achievements, from the physician who accompanied Captain Smith to America to Dr. Carlos Finlay, who is credited with having first formulated a definite theory as to the transmission of yellow fever by the mosquito.

The other more important acquisitions from the same source were as follows: One hundred and thirty-three enlarged colored photographs of individuals who have attained prominence in connection with the history of America; 17 enlarged colored photographs from colored drawings made by John White for Sir Walter Raleigh in 1585; 48 engravings, paintings, and photographs of historic scenes and landmarks; 27 enlarged photographs illustrating the history of the Capitol; 4 groups of two figures each, representing by costumes of the colonial period the nations most prominent in the settlement of America; a model of John Stevens's side-wheel steamboat, the Phoenix; a model of the side-wheel steamship Savannah; a model of an American Indian travois; a primitive sled; a number of the gold coins of the United States; and a fine color photograph from a painting, by Miley & Sons, of Lexington, Va. A number of cases and other pieces of furniture, used in connection with other exhibits, were also secured for the Museum.

International Maritime Exposition, Bordeaux, France.—This exposition, which was also officially opened before the close of the previous fiscal year, was likewise described in the last annual report. Of the \$15,000 appropriated by Congress only about \$8,000 was available for the preparation, installation, and maintenance of the entire government exhibit, which, at the request of the Secretary of State, was undertaken by the Smithsonian Institution and placed in charge of Mr. W. de C. Ravenel. Owing to delays on the part of this Government, the United States pavilion was not completed and turned over to Mr. D. I. Murphy, American consul at Bordeaux, until late in June, but by expeditious methods it was made possible to admit the public on July 4, although the installation was not finished until the 20th of that month. The exposition remained open until November 10, when the work of repacking the collection was immediately begun under the direction of Mr. F. C. Cole, of the Museum staff, who had assisted Mr. Ravenel in its installation. The shipment reached Washington in January, 1908, and the articles contributed by the several government departments were returned to them. A number of objects which had been exhibited by other participants were secured for the Museum.

Alaska-Yukon-Pacific Exposition.—To enable the Government to participate in this exposition, which will be held in Seattle, Washington, in 1909, the sum of \$600,000 was appropriated in the sundry civil act, approved May 27, 1908. Of this amount \$200,000 was allotted for exhibition purposes, under the direction of a board of management to be appointed by the President, composed of three persons now in the employ of the Government. Although the board was not constituted until after the close of the year, it may be mentioned here that Mr. Ravenel, Administrative Assistant of the Museum, has been designated as one of its members. The part specifically directed to be taken by the Smithsonian Institution and National Museum consists in the exhibition of "such articles and material of an historical nature as will impart a knowledge of our national history, especially that of Alaska, Hawaii, and the Philippine Islands, and that part of the United States west of the Rocky Mountains."

ORGANIZATION AND STAFF.

The only change in the matter of organization was made in the department of geology, where three divisions, corresponding with former sections, were substituted for the division of stratigraphic paleontology. They are as follows: Division of invertebrate paleontology, with Dr. R. S. Bassler as curator; division of vertebrate paleontology, with Mr. James W. Gidley as custodian of the mammalian collection, and Mr. Charles W. Gilmore custodian of the

reptilian collection; and division of paleobotany, with Mr. David White as associate curator. The other members of the staff connected with these divisions are given in the list beginning on page 65.

Furloughs without pay were granted to Dr. W. H. Ashmead, whose continued illness still incapacitates him for work, and to Mr. Laurence La Forge, aid in the division of physical and chemical geology. Mr. J. C. Crawford was appointed assistant curator, division of insects, to fill the vacancy caused by the transfer to the Bureau of Entomology of the Department of Agriculture of Dr. Harrison G. Dyar, who had been temporarily occupying this position. The latter, however, still retains the custodianship of the collection of Lepidoptera. Mr. A. C. Weed was made an aid in the division of fishes, and Mr. E. N. Bales, a preparator in the division of physical anthropology.

I regret having to record the death, on July 8, 1907, of Dr. William La Grange Ralph, curator of the section of birds' eggs, to whom the Museum is indebted for especially important gifts and whose services were mainly rendered without compensation. Doctor Ralph was born June 19, 1851, at Holland Patent, New York, where his early years were passed. In his boyhood rambles he imbibed a taste for natural history which had an important bearing on his after life. In 1863 his parents moved to Utica, where he received his preliminary education. He attended Whitestone Seminary, and later the College of Physicians and Surgeons, New York City, where he obtained the degree of doctor of medicine in 1879. Upon his return to Utica he engaged in the practice of his profession, but delicate health soon forced him to abandon his intention of following a medical career, and urged him to less exacting pursuits. He again turned his attention to the fascinations of bird study and the wild life of the woods, and, having independent means, began in earnest the formation of a collection of birds, nests, and eggs of Oneida County. In the study of the local avifauna he became associated with Mr. Egbert Bagg, of Utica, and the researches of the two naturalists resulted in the publication of an Annotated List of the Birds of Oneida County, New York. (Trans. Oneida Hist. Soc., III, 1886, pp. 101-147). This was followed some years later by a supplement, entitled "Additional Notes on the Birds of Oneida County, New York." (Auk, VII, 1890, pp. 229-232).

It was to the subject of oology that Doctor Ralph's energies were chiefly directed, and his cabinet of nests and eggs, at first of not more than local interest, became in later years one of the most important private collections in the United States. His personal work in the field was restricted chiefly to the Adirondacks and Florida, but he obtained by purchase and through the employment of collectors many important desiderata from other parts of the country. When

Major Bendire undertook the preparation of the Life Histories of North American Birds he found an enthusiastic supporter in Doctor Ralph, who proceeded forthwith to contribute specimens and notes with the object of making the undertaking a success. The two published volumes of the Life Histories teem with items from his pen, and his contributions to the Museum egg collection, begun in 1892, number upward of 10,000 specimens, mostly in faultless condition and labeled with great care. His other donations to the National Museum, by no means unimportant in the aggregate, include, among other objects, an excellent specimen of the extinct Philip Island parrot (*Nestor productus*).

At the death of Major Bendire, in 1897, Doctor Ralph was chosen to fill the vacancy of custodian of the section of birds' eggs, and in 1901 his title was changed to curator. He at once proceeded to accumulate data for the continuation of the Life Histories, but owing to the precarious state of his health the third volume of this work was incomplete at the time of his death. Doctor Ralph exhibited a keen interest in the study of wild creatures, and always kept a variety of pets in his office. He was largely instrumental in the introduction of gray squirrels into the Smithsonian grounds, with the object of adding to the attractiveness of the park. Although his tenure of life was rendered uncertain from an early age by reason of an organic affection of the heart, Doctor Ralph was invariably cheerful and optimistic, mild mannered, and of a gentle and unselfish disposition. His loss will be keenly felt by his friends and associates.

Prof. W. O. Atwater, of Wesleyan University, Middletown, Connecticut, who served as honorary curator in charge of the section of foods from 1884 to 1892, died on September 22, 1907. While connected with the Museum he prepared an interesting exhibit illustrating the composition of the human body, and another showing the manner in which food compensates for the daily expenditure of bodily tissue.

THE MUSEUM STAFF.

[June 30, 1908.]

CHARLES D. WALCOTT, Secretary of the Smithsonian Institution, Keeper *ex officio*.

RICHARD RATHBUN, Assistant Secretary, in charge of the U. S. National Museum.

W. DE C. RAVENEL, Administrative Assistant.

SCIENTIFIC STAFF.

DEPARTMENT OF ANTHROPOLOGY:

Otis T. Mason, Head Curator.

Division of Ethnology: Otis T. Mason, Curator; Walter Hough, Assistant Curator; J. W. Fewkes, Collaborator.

Division of Physical Anthropology: Aleš Hrdlička, Assistant Curator.

Division of Historic Archeology: Cyrus Adler, Curator; I. M. Casanowicz, Assistant Curator.

Division of Prehistoric Archeology: William H. Holmes, Curator; E. P. Upham, Aid; J. D. McGuire, Collaborator.

Division of Technology: George C. Maynard, Assistant Curator.

Division of Graphic Arts: Paul Brockett, Custodian.

Section of Photography: T. W. Smillie, Custodian.

Division of Medicine: J. M. Flint, U. S. Navy (Retired), Curator.

Division of Historic Religions: Cyrus Adler, Curator.

Division of History: A. Howard Clark, Curator.

Associate in Historic Archeology: Paul Haupt.

DEPARTMENT OF BIOLOGY:

Frederick W. True, Head Curator.

Division of Mammals: Frederick W. True, Curator; Marcus W. Lyon, jr., Assistant Curator.

Division of Birds: Robert Ridgway, Curator; Charles W. Richmond, Assistant Curator; J. H. Riley, Aid.

Division of Reptiles and Batrachians: Leonhard Stejneger, Curator; R. G. Palnc, Aid.

Division of Fishes: B. W. Evermann, Curator; Barton A. Bean, Assistant Curator; Alfred C. Weed, Aid.

Division of Mollusks: William H. Dall, Curator; Paul Bartsch, Assistant Curator; William B. Marshall, Aid.

Division of Insects: L. O. Howard, Curator; J. C. Crawford, Assistant Curator; H. S. Barber, Aid.

Section of Myriapoda: O. F. Cook, Custodian.

Section of Diptera: D. W. Coquillett, Custodian.

Section of Coleoptera: E. A. Schwarz, Custodian.

Section of Lepidoptera: Harrison G. Dyar, Custodian.

Section of Orthoptera: A. N. Caudell, Custodian.

Section of Arachnida: Nathan Banks, Custodian.

Section of Hemiptera: Otto Heidemann, Custodian.

DEPARTMENT OF BIOLOGY—Continued.

Division of Marine Invertebrates: Richard Rathbun, Curator; J. E. Benedict, Assistant Curator; Mary J. Rathbun, Assistant Curator; Harriet Richardson, Collaborator.

Section of Helminthological Collections: C. W. Stiles, Custodian; B. H. Ransom, Assistant Custodian.

Division of Plants (National Herbarium): Frederick V. Coville, Curator; J. N. Rose, Associate Curator; W. R. Maxon, Assistant Curator; J. H. Painter, Aid.

Section of Cryptogamic Collections: O. F. Cook, Assistant Curator.

Section of Higher Algae: W. T. Swingle, Custodian.

Section of Lower Fungi: D. G. Fairchild, Custodian.

Associates in Zoology: Theodore N. Gill, C. Hart Merriam, R. E. C. Stearns, W. L. Abbott.

Associates in Botany: Edward L. Green, John Donnell Smith.

DEPARTMENT OF GEOLOGY:

George P. Merrill, Head Curator.

Division of Physical and Chemical Geology (Systematic and Applied): George P. Merrill, Curator.

Division of Mineralogy: F. W. Clarke, Curator; Wirt Tassin, Assistant Curator.

Division of Invertebrate Paleontology: R. S. Bassler, Curator; Lancaster D. Burling, Assistant Curator.

Carboniferous Collection: George H. Girty, Custodian.

Mesozoic Collection: T. W. Stanton, Custodian.

Cenozoic Collection: W. H. Dall, Associate Curator.

Madreporarian Corals: T. Wayland Vaughan, Custodian.

Division of Vertebrate Paleontology:

Mammalian Collection: James W. Gidley, Custodian.

Reptilian Collection: Charles W. Gilmore, Custodian.

Division of Paleobotany: David White, Associate Curator; A. C. Peale, Aid; F. H. Knowlton, Custodian of Mesozoic Plants.

Associate in Mineralogy: L. T. Chamberlain.

Associate in Paleontology: Charles A. White.

Associate in Paleobotany: Lester F. Ward.

DEPARTMENT OF MINERAL TECHNOLOGY:

Charles D. Walcott, Curator.

NATIONAL GALLERY OF ART:

William H. Holmes, Curator.

ADMINISTRATIVE STAFF.

Chief of Correspondence and Documents: R. I. Geare.

Disbursing Agent: W. I. Adams.

Superintendent of Construction and Labor: J. S. Goldsmith.

Editor: Marcus Benjamin.

Editorial Assistant: E. S. Steele.

Assistant Librarian: N. P. Scudder.

Photographer: T. W. Smillie.

Registrar: S. C. Brown.

Property Clerk: W. A. Knowles.

LIST OF ACCESSIONS TO THE COLLECTIONS DURING THE FISCAL YEAR 1907-1908.

[Except when otherwise indicated, the specimens were presented or were transferred by bureaus of the Government in accordance with law.]

ABBE, CLEVELAND, jr., Washington, D. C.: German and Austrian cakes (12409: loan).

ABBOTT, W. L., Singapore, Straits Settlements: A large and valuable collection of ethnological and natural history specimens from Sumatra and adjacent islands (47566); a large and very interesting collection of material illustrating the manners and customs of the Dyaks, and of natural history specimens, including mammals, birds, reptiles, etc., from Borneo (48220).

ACADEMY OF NATURAL SCIENCES, Philadelphia, Pa.: Collection of birds' skins, Formicariidae (48868: loan).

ADLER, CYRUS, Smithsonian Institution: Pair of Jewish phylacteries from Jerusalem (48064).

AGRICULTURE, DEPARTMENT OF:

Bureau of Animal Industry: Skin and skeleton of a female Grevy zebra from Abyssinia (47992).

Bureau of Biological Survey: 3 living cacti, *Opuntia*, collected in Colorado by Merritt Cary (47552); 2 living cacti, *Opuntia*, collected by Vernon Bailey at Warren, Cal. (47568); 3 cacti, *Opuntia*, collected by Vernon Bailey in California (47627); 5 plants from California collected by Vernon Bailey (47628); 2 cacti, *Opuntia*, from California collected by E. A. Goldman (47629); lizard from China (47630); specimens of living cactus, *Opuntia*, from Colorado (47638); 31 flies (47651); 2 plants from California collected

AGRICULTURE, DEPARTMENT OF—Cont'd.
by Vernon Bailey (47652); plants from Colorado collected by Merritt Cary (47653); 12 specimens of Diptera from the District of Columbia and vicinity (47708); living cacti, *Opuntia*, collected in Colorado by Merritt Cary (47711); 2 plants, *Pinus*, collected in Colorado by Merritt Cary (47735); 5 specimens of living cacti, *Opuntia*, collected in California by Vernon Bailey (47804); living specimen of cactus, *Opuntia*, collected in California by Vernon Bailey (47811); 2 specimens of *Juniperus occidentalis* collected in Siskiyou County, Cal., by C. Hart Merriam (47825); 6 plants collected in Colorado by Merritt Cary (47838); 2 living cacti, *Opuntia*, collected in California by Vernon Bailey (47888); living specimen of cactus, *Opuntia*, collected in California by Vernon Bailey (47978); 7 plants collected in Colorado by Merritt Cary (48017); specimen of living plant, *Dudleya*, collected in California by E. A. Goldman (48020); 2 living cacti, *Opuntia*, collected in California by Vernon Bailey (48028); 14 plants collected in California by E. A. Goldman (48059); 3 living cacti, *Opuntia*, collected in Colorado by Merritt Cary (48073); 2 specimens of cacti, *Opuntia*, collected in Washington and North Dakota (48125); 4 plants collected by Merritt Cary in Colorado (48137); 6 plants from Nebraska collected by Merritt Cary

AGRICULTURE, DEPARTMENT OF—Cont'd.

(48179); 2 living plants, Crassulaceae, obtained by E. A. Goldman, from Berkeley, Cal. (48215); 12 birds in alcohol, 3 spiders and a leech (48259); 3 species of land and fresh-water shells from California (48336); 83 plants collected by Vernon Bailey in the western section of the United States (48353); 6 living plants, *Dudleya*, collected in California by E. A. Goldman (48382); specimen of sedge, *Carx nebraskensis*, from California, collected by C. Hart Merriam (48438); 21 plants collected in Colorado by Merritt Cary (48616); 2 plants from California (48621); 2 plants collected in Louisiana by A. H. Howell (48668); 2 plants, *Amelanchier*, collected in the District of Columbia by W. L. McAtee (48715); plant, *Agave deserti*, from California, collected by Vernon Bailey (48728).

Bureau of Entomology: 42 specimens of Lepidoptera collected in Mexico by R. Müller (47546); 14 mosquitoes collected at Stockton and transmitted by H. J. Quayle, Berkeley, Cal. (47560); 43 specimens of Lepidoptera from R. Müller, Mexico City, Mexico (47575); about 100 specimens of insects, mostly larvae, collected by John R. Johnston, Bureau of Plant Industry, in connection with his investigations of the "bud rot" of the coconut palm in the West Indies (47607); 102 specimens of Hemiptera from various sources, principally collected by E. S. G. Titus (47608); reptiles and a crustacean collected by George P. Goll, in Guatemala (47615); large collection of insects from the Canal Zone, Panama, made by Mr. August Busck in the summer of 1907 (47667); 42 Lepidoptera from R. Müller, Mexico City, Mexico (47746); 79 specimens of Lepidoptera from R. Müller (47755); 57 specimens of Hymenoptera, types of new species (47835); specimen of

AGRICULTURE, DEPARTMENT OF—Cont'd.

Lampronota marginata (47836); 50 insects from Dr. A. Dugès, Guanaquato, Mexico (47842); 24 slides of *Collembola* and *Thysanura* from Mrs. F. L. Harvey, Orono, Me. (47848); 14 insects from Rev. A. H. Manee, Southern Pines, N. C. (47849); about 50 insects, mostly Hymenoptera (47864); 3 specimens of Coleoptera and 1 of Hymenoptera from Rev. A. H. Manee (47892); 10 specimens of an isopod, *Armadillidium vulgare*, from Waco, Tex., collected by Paul Hauhurst (48088); 51 specimens of Lepidoptera from Mexico, collected by R. Müller (48131); about 1,000 specimens of Lepidoptera from Texas, resulting from the cotton-boll weevil investigations (48160); 2 nests of a butterfly, *Eucheira socialis*, from Mexico (48161); isopod, *Ligyda exotica*, from the Azores, collected by L. O. Howard, and an isopod, *Metoponorthus pruinosis*, from Dalton, Tex., collected by W. Dwight Pierce (48165); 600 specimens of named Hymenoptera (48218); about 200 insects from Mexico sent by Frederick Knab (48224); about 200 insects from Mexico, collected by F. Knab (48242); 40 specimens of Lepidoptera from Mexico obtained by R. Müller (48258); 291 specimens of Hemiptera obtained from Robert Meusel, Kismaros, Nógrád-megye, Hungary (48264); about 250 insects collected by F. Knab in Cordoba, Mexico (48307); about 80 insects collected by E. G. Kelly at Manhattan, Kans. (48309); about 50 larvae and cocoons of Lepidoptera from North China, collected by F. N. Meyer (48365); 12 chironomid flies (48358); 40 specimens of Lepidoptera from Mexico, collected by R. Müller (48375); 7 flies obtained from V. A. E. Daecke, Philadelphia, Pa. (48376); 5 flies from Dr. D. Lahille, Argentina (48377); 1,148 specimens of Coleoptera, mainly European, but including a few from

AGRICULTURE, DEPARTMENT OF.—Cont'd.
 Java (48408); 2 isopods, *Porcellio dilatatus*, from California (48433); about 50 insects collected by O. W. Barrett (48465); about 300 specimens of Lepidoptera from Mexico, collected by F. Knab (48468); 10 specimens of Diptera and 2 of Hymenoptera from B. Bilgen, Paramaribo, Surinam (48477); 50 specimens of Lepidoptera (lot 24) collected by R. Müller (48487); about 100 mosquitoes, larvae on slides and in alcohol, obtained by Dr. James Alken, British Guiana (48491); about 250 specimens of Lepidoptera, collected by F. Knab in Mexico (48510); 41 specimens of Lepidoptera from H. Lacy, Kerrville, Tex. (48522); 6 specimens of Diptera from Para, Brazil, sent by Carl F. Baker (48533); 3 specimens of Hymenoptera of the group Apheleninae (48534); 2 specimens of Hymenoptera from Hawaii (48542); 6 specimens of Hymenoptera from Nathan Banks (48548); 11 parasitic Hymenoptera bred from *Cecidomyia* by H. A. Ballou, Antigua, West Indies (48562); about 75 seed pods of *Yucca* containing larvae, probably of *Pronuba* (48573); 7 specimens of Hymenoptera, types and cotypes of *Cosmocomoides morrillii* (48574); about 300 specimens of Lepidoptera from Mexico, collected by F. Knab (48575); 4 specimens of Hymenoptera, *Pamphilus persicum*, from W. E. Britton, New Haven, Conn. (48581); 46 specimens of Lepidoptera from R. Müller, Mexico City (48595); 3 specimens of Diptera, types of *Zygobothria nidicola* and *Tachnia utilis*, bred at the Gypsy Moth Laboratory, Melrose Highlands, Mass. (48599); 2 specimens of Lepidoptera and 2 noctuids (48608); 21 specimens of Lepidoptera and 2 of Hymenoptera (48617); 5 mosquitoes, *Edes teniorhynchus*, from La Boca, Panama (48624); 19 specimens of Lepidoptera from E. S. Tucker, Texas (48634); about 500

AGRICULTURE, DEPARTMENT OF.—Cont'd.
 insects collected by F. Knab in Mexico (48641); 7 specimens of Lepidoptera, *Tetralopha subcautilis* (48642); about 500 specimens of Lepidoptera obtained by F. Knab in Mexico (48645); about 500 specimens of Lepidoptera obtained by F. Knab in Mexico (48653); 21 specimens of Lepidoptera from E. S. G. Titus (48664); 39 specimens of Lepidoptera obtained by R. Müller in Mexico (48689); 16 slides of insects (48694); 237 specimens of Lepidoptera from Texas (48705); about 1,000 specimens of Lepidoptera from Mexico, collected by F. Knab (48742); about 200 specimens of Lepidoptera collected by F. Knab (48751); Limacodid larva, Lepidoptera (48764); about 4,000 specimens of Hymenoptera collected in the vicinity of Washington, D. C., by H. H. Smith (48765); 2 lepidopterous larvae from Florida (48766); about 2,000 specimens of Hymenoptera, including many types, belonging to the subfamily Encyrtinae (48856); about 6,000 insects collected in Mexico by F. Knab (48886); 11 ants from Tahiti, and an Encyrtid from Cape Town, Africa (48898); 4 specimens of Hymenoptera and 2 specimens of Diptera from California (48899); 20 specimens of Lepidoptera, *Acrobasis* sp.; 15 specimens of *Megastylus collaris* (Hymenoptera) and 3 specimens of *Syntomaspis druforum* (Hymenoptera) (48900); tree-frogs from Mexico (48921).

Bureau of Plant Industry: 139 plants collected by F. V. Coville in Oregon (47642); specimen of living cactus, *Opuntia*, collected by O. F. Cook in Guatemala (47668); plants collected by C. R. Ball in Texas (47695); 5 specimens of living cacti, *Opuntia*, collected in Texas by C. R. Ball (47718); 18 specimens of living Cactaceae and Crassulaceae, collected in Texas by F. L. Lewton and R. M. Meade (47766); 3 specimens of *Juniperus pinchoti*, collected in Texas

AGRICULTURE, DEPARTMENT OF—Cont'd.

by C. V. Piper (47805); between 200 and 300 insects collected in Guatemala by Argyle McLaughlin (47845); 3 living orchids from Florida collected by Mrs. Agnes Chase (47870); 165 specimens of Harvey's "Maine weeds and forage plants" (47900); 1,640 grasses from various localities (47958); 3 plants collected in Porto Rico by L. H. Dewey (48027); a collection of 2,556 grasses from various parts of the United States, many of them having been collected by Virginus H. Chase, Wady Petra, Ill. (48037); 28 plants from central New York, obtained by W. W. Rowlee (48052); 5 plants (48072); 2 living plants, *Echinocereus viridiflorus*, collected in Texas by C. R. Ball (48297); 234 plants collected in Mexico in 1907 by W. E. Safford (48379); 4 living plants, *Dudleya pulcherrima* and *Echinocactus viridescens*, collected by W. T. Swingle in California (48437); 2 living specimens of *Dudleya* collected in California by W. T. Swingle (48478); 16 plants collected by C. V. Piper in the southwestern part of Virginia (48779).

Experiment Stations: 24 specimens of Alaskan plants collected by Miss E. F. Woolsey (48129); 59 specimens of Hawaiian algae collected by Miss Minnie Reed, of the Kamahameha schools and transmitted by the Hawaiian Experiment Station (47822).

Forest Service: Specimen of living cactus, *Opuntia*, collected in Utah by I. Tidestrom (47712); specimen of cactus, *Opuntia*, and a package of seeds collected by I. Tidestrom (47767); 5 living plants, *Echinocereus*, collected in Utah by I. Tidestrom (47786); 10 specimens of living cacti, *Opuntia*, collected in Utah by I. Tidestrom (47801); living cactus, *Opuntia*, collected in Colorado by I. Tidestrom (47854); 5 specimens of living cacti, *Echinocereus* sp., from Hugo, Utah (47910); 2

AGRICULTURE, DEPARTMENT OF—Cont'd.

living specimens of cacti, *Opuntia*, collected in Utah by I. Tidestrom (47977); about 500 plants collected by I. Tidestrom in Utah (48199); 245 plants from Oregon collected by Messrs. Sampson and Pierson (48214); 108 plants collected in Oregon by James T. Jardine (48326); specimen of living cactus, *Opuntia*, from Arizona, collected by I. Tidestrom (48572); 39 plants collected in Arizona by I. Tidestrom (48692).

AGRICULTURE DEPARTMENT, Fisheries Branch of. (See under Dublin, Ireland.)

AINSLEY, C. N., Department of Agriculture, Washington, D. C.: Specimen of two-winged fly, *Opsebius sulphuripes* (48430).

ALBANY MUSEUM. (See under Grahamstown, Cape Colony, South Africa.)

ALDRICH, HELEN F., Wilmington, Mass.: Spider, *Epcira insularis* (47981).

ALDRICH, J. M., Moscow, Idaho: 15 specimens of flies, Helomyzidae (48812: exchange).

ALDRIDGE, C. P., Roanoke, Va.: Worm known among fishermen as the "dobson," *Corydalis cornutus* (48864).

ALEXANDER, CHARLES P., Johnstown, N. Y.: 3 specimens of *Hymenoptera* (48464).

ALEXANDER, WILLIAM H., Empire, Canal Zone, Panama: Beetle, *Acrocinus longimanus* (48917).

ALFARO, ANASTASIO, San José, Costa Rica, Central America: Reptiles and batrachians from Costa Rica (48560); 10 skins of *Cistothorus polyglottus lucidus* from Costa Rica (48880).

ALLAIRE, C. B., San Antonio, Tex.: 2 specimens of cactus, *Opuntia* (48903).

ALLEN, JOHN A., Cleveland, Ohio: *Anacharis* associated with living specimens of *Ancylus* and *Planorbis* from Ohio (48128).

- ALLEN, R. A., jr., U. S. National Museum: Arrow points and fragments of pottery from Terrapin Neck, Amelia County, Va. (48105).
- AMERICAN MUSEUM OF NATURAL HISTORY, New York City: Collection of fossil mammals (48172: exchange); plan and sketch illustrating the death drum from the Bismarck Archipelago (48166); 2 casts each of the fore and hind feet of *Campotodus dispar* (48821: exchange); 20 specimens of Formicariidae (48914: loan).
- ANDERSON, Rev. R. W., Eagle Pass, Tex.: Large noctuid moth, *Erebos odora* (47576).
- ANDREWS, Miss E. F., Montgomery, Ala.: 2 specimens of *Argemone* from Alabama (48820).
- APPLETON, Eben, New York City: The flag which floated over Fort McHenry when Key composed "The Star Spangled Banner" (12341: loan).
- D'AQUINO, J. L. F., Shanghai, China: 100 birds' eggs from China (47937: purchase).
- ARCHENHOLD, Dr. F. S., Treptow-Sternwarte, Treptow bei Berlin, Germany: 2 specimens of moldavite (48419: exchange).
- BABBITT, Col. E. B., U. S. Army (through Capt. Frank R. McCoy, U. S. Army): 2 heads of wild carabao from northern Luzon (48425).
- BACK, ERNEST A., Orlando, Fla.: Moth, *Syntomocida ipomace* (47744).
- BAILEY, J. W. T., Atkins, Ark.: Photograph of a collection of Indian relics belonging to Mr. Bailey (48647).
- BAKER, CARL F., Santiago de las Vegas, Cuba: Specimen of cereus fruit from Cuba (47656: exchange); 157 specimens of Lepidoptera (47675); 9 specimens of ferns (47875); a set of economic plants from various parts of the world (47970: exchange); 75 specimens of Lepi-
- BAKER, CARL F.—Continued.
doptera (48594); about 75 specimens of Lepidoptera, chiefly from Brazil (48640); about 50 specimens of Lepidoptera (48814).
- BAKER, CHARLES, Paducah, Ky.: Albino raccoon, *Procyon lotor* (48654: purchase).
- BAKER, F. H., Richmond, Victoria, Australia: 60 shells from Australia (47896; 48391: exchange); photograph of *Voluta roadknighiti*; 28 specimens representing 11 species of marine shells from Australia (48076).
- BALDERSTON, JOHN L., Kennett Square, Pa.: Specimen of plant, *Centaurea*, from Pennsylvania (47856); 2 specimens of *Stachys germanica* from Pennsylvania (48905).
- BALES, ERNEST, U. S. National Museum: Spanish boatswain's whistle from a wrecked vessel at Cavite (48674); 7 specimens—larvae, pupae, and adult—of *Veapa maculata*, from Fairfax County, Va. (48857).
- BALLOU, H. A. (received through the Bureau of Entomology, Department of Agriculture): About 250 specimens of Lepidoptera from St. Lucia and Dominica, West Indies (48839).
- BAMBERG, PAUL, Friedmann bei Berlin, Germany: 638 species of fossils from the upper Jurassic, Eocene, Miocene, Pliocene, and Oligocene of Europe (48855: exchange).
- BANGS, OUTRAM, Boston, Mass.: 10 specimens of *Scelaphorus flammula* from Costa Rica (48365); 144 birds' skins from Costa Rica (48623: exchange).
- BANKS, NATHAN, Department of Agriculture, Washington, D. C.: 2 bees, *Neopasites* sp., from near Falls Church, Va., and a specimen of *Eucrococoris guttulatus* from the same locality (47561: 47674).
- BARBER, H. S., U. S. National Museum: Skin and skull of a porcupine, *Erethizon*, from near Crab Lake, Vilas County, Wis.; insects found on various fungi (48106).

- BARBER, MANLY D., Knoxville, Tenn.: About 500 specimens of Ordovician fossils from the vicinity of Knoxville (47721: exchange): 33 specimens of Mississippi fossils (48123).
- BARBER, V. S., Washington, D. C.: Chain with links of coiled stem, obtained from the Digger Indians of California (48186).
- BARBOUR, THOMAS, Museum of Comparative Zoology, Cambridge, Mass.: 2 frogs from Ecuador and a lizard from the Bonin Islands (48333).
- BARCLAY, GEORGE C., Newport News, Va.: 5 stone implements (47824): 6 fragments of pottery (48156).
- BARROTT, A. F., Washington, D. C.: Human lower jaw from a burial-mound at Bassett, Mississippi County, Ark. (47670): sphere of granite from Spencer, Tioga County, N. Y. (48054).
- BARTLETT, C. L., Bristol, Vt.: Fern, *Osmunda*, from Vermont (48943).
- BARTLETT, H. H., Gray Herbarium, Cambridge, Mass.: 3 specimens of *Lacinaria* from Georgia (48005).
- BARTRAM, EDWIN B., Wayne, Pa.: 49 plants from Virginia, New Jersey, etc. (48401).
- BAXLEY, IVAN A., Sydney Mines, Nova Scotia: Sea mouse, *Aphrodita aculeata* (47539).
- BEACH, SUMNER, Wilder, Mont.: 5 stone implements (47817).
- BEAN, DR. ROBERT BENNETT, Manila, P. I.: Anatomical specimens (48849).
- BECKER, TH., Liegnitz, Germany: 2 dipterous insects, *Dicrus obscurus*, from southern Europe (48517).
- BELL, DR. ALEXANDER GRAHAM, Washington, D. C.: Collection of telephonic apparatus, including the remaining parts of the first speaking telephone and originals of many early forms of telephone (48850: loan).
- BENEDICT, J. E., JR., Woodside, Md.: 4 crayfishes from North Carolina (48203).
- BENGUIAT, HADJI EPHRAIM, New York City: Jewish religious ceremonial objects (48385: loan).
- BENJAMIN, MARCUS, U. S. National Museum: Photograph of trophy awarded by the Scientific American for "heavier-than-air" flying machines (47841): platinum-alcohol cigar lighter (47850).
- BERLIN, GERMANY, KÖNIGL. ZOOLOGISCHES MUSEUM: 110 specimens of Orthoptera (48049: exchange).
- BERLIN, GERMANY, ROYAL BOTANICAL MUSEUM: 670 plants, obtained mainly from cultivation (48150: exchange).
- BEVERIDGE, HON. ALBERT J., United States Senate: Swords, weapons, and other articles collected in the Philippine Islands, Japan, and elsewhere in the Far East (48702: loan).
- BICKLEY, F. D. T., Marietta, Ohio: Stone implements from camping grounds of the Six Nations, New York State (48188).
- BIDDLE, LYDIA SPENCER, Washington, D. C.: Silver pitcher, 1750, and silver sugar bowl, 1780 (48801: loan).
- BIEDERMAN, C. R., Palmerlee, Ariz.: 6 specimens of Coleoptera from near the mouth of Millers Cañon, Huachuca Mountains, Ariz. (48016).
- BIENKOWSKI, A., Ancon, Canal Zone, Panama: Costumes worn by the Indians of Veraguas and other places in the interior of the Republic of Panama: nest of an "Oropindola" (48141).
- BIGELOW, WILLIAM STURGIS, Boston, Mass.: One of the earliest bicycles made in the United States (47725).
- BIRD, HENRY, Rye, N. Y.: 6 moths, 5 cotypes of *Hydrocnius*, and a Tineid, *Gnorimoschema gallaesolidaginis* (48317).
- BISSET, PETER, Washington, D. C.: Plants, *Nymphaea* (47603).
- BITZ, FRANKLIN W., Baltimore, Md.: Human skull from the ruins of an Inca city in Bolivia (48064).

- BLACK, Lieut. FRED. F., U. S. Army, Fort Lisicum, Alaska: 60 plants from Alaska (48472).
- BLACKISTON, A. II., El Paso, Tex.: Archeological material from the Casas Grandes Valley, Chihuahua, Mexico (48488, 12355, 12511, 12571). Loan.
- BLAKE, F. P., Imperial, Cal.: Snake, *Chionactis annulatus* (48428).
- BLANCHARD, W. H., Westminster, Vt.: 203 plants, *Rubus, Amelanchier* and *Betula*, from the northeastern part of the United States and Canada (48596: purchase).
- BLANKINSHIP, O. F., Richmond, Va.: Samples of diatomaceous earth from several localities in Richmond (48479).
- BLANKINSHIP, J. W., Steglitz, Berlin, Germany: 189 specimens of plants from Montana (48859: purchase).
- BLUMER, J. C., Paradise, Ariz.: 15 living plants from Arizona (47973).
- BLUMER, MRS. J. C., Paradise, Ariz.: 2 plants from Arizona (47626).
- BOSTON SOCIETY OF NATURAL HISTORY, Boston, Mass.: 136 specimens of Lepidoptera collected by Owen Bryant (48551).
- BOTANICAL GARDEN AND INSTITUTE OF THE ROYAL UNIVERSITY. (See under Vienna, Austria.)
- BOTANICAL MUSEUM OF THE UNIVERSITY OF LAUSANNE. (See under Lausanne, Switzerland.)
- BOTANICAL SOCIETY OF WESTERN PENNSYLVANIA, Pittsburg, Pa.: 2 plants, *Lactuca*, from Pennsylvania (48327).
- BOULENGER, G. A. (See under Egyptian Government.)
- BOWDOIN, MRS. JAMES S., Washington, D. C.: Piece of Rhodian embroidery (48800: loan).
- BOYADJIAN, BENJAMIN H., Mersina, Turkey in Asia: Wax impressions of the seal of a ring (48496).
- BRANDEGEE, T. S., Berkeley, Cal.: Living plant, *Cercus vagans*, from Mexico (47733: exchange); 5 Mexican ferns (48002); fern from Mexico (48644).
- BRAUN, MISS ANNETTE F., Cincinnati, Ohio: 24 specimens of Microlepidoptera (48043, 48523).
- BREEN STONE COMPANY, St. Paul, Minn.: 2 samples of marble from Kasota, Minn. (48389).
- BREWER, ISAAC W., Fort Huachuca, Ariz.: Several specimens of *Physa* from Huachuca Cañon, Ariz. (47907).
- BREWER, S. W., Singer Glen, Va.: Copperhead, *Agkistrodon contortrix* (47540).
- BRICKLAYERS COMPANY OF THE CITY AND COUNTY OF PHILADELPHIA, Philadelphia, Pa. (received through William Smith, chairman of committee on history): An engraved illustration entitled "Plans of house in which Thomas Jefferson wrote the Declaration of Independence" (48590).
- BRIMLEY, C. S., Raleigh, N. C.: 82 specimens of Lepidoptera (47641; 47748; 48274; 48335; 48374).
- BRIMLEY BROTHERS, Raleigh, N. C.: 2 specimens of *Amphiuma* (47703: purchase).
- BRINTON, MRS. FREDERIC C., West Chester, Pa.: Marble-top table formerly owned by Thomas Jefferson (48163).
- BRINTON, J. PERCY, West Chester, Pa.: Photograph of the late Dr. D. G. Brinton (48184).
- BRITISH MUSEUM (NATURAL HISTORY). (See under London, England.)
- BROADWAY, W. E., Port-of-Spain, Trinidad: 3 plants, *Cissus* (48238: purchase).
- BRODIE, W., Toronto, Canada: 4 garter snakes from Canada (48262).
- BROMLEY, HOWARD, Farnville, Va.: Specimen of tortoise-beetle, *Coptocycla pallida* (47833).

- BROOKLYN, NEW YORK, THE MUSEUM, INSTITUTE OF ARTS AND SCIENCES: 5 Longicorn beetles (48426: exchange); ethnological specimens from the cliff dwellers of the Cañons de Chelly and del Muerto, Ariz. (48591: exchange); 3 specimens of Hymenoptera from Surinam (48655); Pomo Indian tule boat with wooden paddles (48661): exchange).
- BROOKS, LEWIS, Santiago de Cuba: Large crab, *Mithrax spinosissimus* (47541).
- BROWN, E. J., Lemon City, Fla.: Fishes, reptiles, insects, and invertebrates from Florida (48597).
- BROWN, MRS. GILES GORTON, Battle Creek, Mich.: 25 photographs illustrating the native life of the Tamils, a people of northeastern Ceylon (48672).
- BROWN, H. H., Glenwood, Cal.: Larva of a caddis fly (47545).
- BROWN, HIRAM, Franklin, Pa.: 10 specimens of "mud puppy," *Cryptobranchus* (47793: purchase).
- BROWN, WILLIAM, Oil Center, Cal.: Praying mantis, *Stagmomantis limbata* (47935).
- BRUSSELS, BELGIUM, JARDIN BOTANIQUE DE L'ÉTAT: 42 plants, mainly ferns, from tropical America (48579: exchange).
- BRYANT, OWEN, Cohasset, Mass.: 48 birds' skins from Newfoundland (47837); 3 specimens of lizard, *Sphaerodactylus*, from Andros Island, Bahamas (48657).
- BUCHANAN, WILLIAM R., Washington, D. C.: Anatomical specimen (48824).
- BUCKHOUT, W. A., State College, Pa.: Berries of *Gaultheria procumbens* from Pennsylvania (48126).
- BUCKLER, C. HOWARD, Washington, D. C.: Old style, wooden bicycle with iron tires, etc. (47898).
- BUDAPEST, HUNGARY, HUNGARIAN NATIONAL MUSEUM: 70 specimens of Chrysidiidae (47644: exchange).
- BURBANK, LUTHER, Santa Rosa, Cal.: 3 flowers of *Nopalca* sp., from cultivation (47775); specimen of living spineless cacti, *Opuntia* (47950).
- BUSCK, AUGUST, Department of Agriculture, Washington, D. C.: Concretion from the Culebra cut, Canal Zone, Panama (47666); bats; skin and skull of porcupine from Panama (47697: collected for the Museum); reptiles and batrachians from the Canal Zone, Panama (47759); 13 specimens of Lepidoptera from Maryland (48635); 12 specimens of Hymenoptera, parasitic on spider's eggs, from Hyattsville, Md. (48699); 75 specimens of Lepidoptera (48746).
- BUSH, B. F., Courtney, Mo.: 125 plants from Missouri and other localities (47800: purchase and 48226: exchange).
- BUTLER, J. H., jr., Youngstown, Ohio: Photographs of Indian portraits in Mr. Butler's collection (48290).
- BUYSMANN, M., Lawang, Paseroean, Java: 100 ferns from Java (48248: purchase).
- CALCUTTA, INDIA, ROYAL BOTANIC GARDEN (received through the Royal Botanic Gardens, Kew, England): 30 plants from Tibet (47772: exchange).
- CALDWELL, REV. HARRY, ERNEST B., and EDEN F., Ngu-cheng, China: 218 insects, mostly butterflies, from Sharp Peak Island, near Foochow, collected in 1907 (47826).
- CALIFORNIA, UNIVERSITY OF, Berkeley, Cal.: Plants and a fern from Lower California and Mexico (47751; 48096; 48111: exchange); plant from Lower California (48008).
- CAMBRIDGE, MASS., MUSEUM OF COMPARATIVE ZOOLOGY: 2 toads from Bengal (48740); 5 snakes, *Diodophis* (48346: loan); 95 crinoids (47928: exchange).
- CANNON, W. A., Tucson, Ariz.: Specimen of living cactus, *Opuntia*, from Arizona (48754).

- CARNEGIE HERO FUND COMMISSION, Pittsburgh, Pa.: A specimen of the Carnegie hero fund medal in silver (48706).
- CARNEGIE INSTITUTION, Washington, D. C.: Ordovician fossils from China collected by Bailey Willis and Elliot Blackwelder (47618); 15 specimens of cacti, *Opuntia*, from Arizona (47839); seeds of cactus, *Opuntia*, from Arizona, collected by Dr. D. T. MacDougal (47908); 6 living cacti, *Opuntia*, from Arizona (47917); seeds of cacti, *Opuntia*, from Arizona (47951); 87 dried plants, 14 cacti, and seeds from Sonora, Mexico, received through Dr. D. T. MacDougal (48168); recent corals, geological specimens, and bottom samples from the Florida coast, keys and reefs (48922).
- CARSON, WILLIAM S., Kalama, Wash.: Samples of coprolites from Salmon Creek, Wash. (48695).
- CASA GRANDE EXCAVATIONS, 1907: About 1,000 specimens of stone implements, pottery, basketry, fabrics, etc., resulting from explorations and excavations conducted at the Casa Grande Ruin, Ariz., by Dr. J. Walter Fewkes, 1906-1907, under a special appropriation in the sundry civil act approved June 30, 1906 (48761).
- CASEY, COL. THOMAS L., U. S. Army, Washington, D. C.: Specimen of *Omophron gemma* from the type set (48356).
- CENTRAL EXPERIMENTAL FARM, DEPARTMENT OF AGRICULTURE (See under Ottawa, Canada.)
- CHAGNON, G., Montreal, Canada: 9 specimens of Hymenoptera (47613).
- CHAMBERLAIN, EDWARD B., New York City: 2 mosses from Japan (48011).
- CHAPIN, GUY, Dunn Loring, Va.: Specimen of *Samia cecropia* with eggs (48832).
- CHAPPELEAN, MARY V., Benedict, Md.: Specimen of luna moth, *Actias luna* (48837).
- CHASE, V. H., Wady Petra, Ill.: 206 plants from Illinois (48122: exchange).
- CHICAGO, UNIVERSITY OF, Chicago, Ill.: 75 guttapercha impressions of type specimens of invertebrate fossils (47840); plant, *Lycopodium pithyoides*, from Jalapa, Mexico (47919: exchange).
- CHITTENDEN, F. H., Bureau of Entomology, Department of Agriculture, Washington, D. C.: 225 specimens of Coleoptera from Venezuela (48104).
- CLARK, AUSTIN H., Bureau of Fisheries, Washington, D. C.: 44 microscopic slides of *Glossiphonia stagnalis* and *G. parasitica* (48115).
- CLARK, H. WALTON, Bureau of Fisheries, Washington, D. C.: 2 plants collected in Indiana and the District of Columbia (48530); living specimens of *Ancylus* from Piney Branch, D. C. (48663); plant, *Viola* sp., collected in Maine by W. C. Kendall (48713).
- CLEMENS, REV. JOSEPH, Fort Douglas, Utah: Plants from Mindanao, Philippine Islands (48547).
- CLENDENIN, R. H., Martinsdale, Mont.: Specimen of barite (47750).
- COCKERELL, T. D. A., Boulder, Colo.: 14 insects, including the type of a Lepidopteron (48461); 11 specimens representing 2 species of Hymenoptera (48643); 27 specimens of Diptera, 6 specimens of Hymenoptera and nest-cells of a bee, *Anthophora forbesi* (48652). (See also under S. A. Rohwer.)
- CODMAN, MISS M. C., Washington, D. C.: 2 pieces of lace, point d'Angleterre and Vandyke point, and 5 pieces of pottery (48804: loan).
- COFFIN, SELDEN J., Easton, Pa.: The distributing portion of Prof. James H. Coffin's self-recording anemometer (47594).
- COLEMAN, MR., Old Point Comfort, Va.: Piece of anchor rope of the boat in which Captain Slocum sailed from South America to this country (48393).

COLLEGE OF PHYSICIANS AND SURGEONS,
COLUMBIA UNIVERSITY. (See under
New York City.)

COLLINS, FRANK S., Malden, Mass.: 50 specimens of North American algae; fascicle XXIX of the "Phycotheca Boreali-Americana" of Collins, Holden, and Satchell (48378); 50 specimens of algae fascicle, 30 of "Phycotheca Boreali-Americana" (48902: purchase).

COLORADO, MUSEUM OF THE UNIVERSITY OF, Boulder, Colo.: Types of the species *Acanthoceras coloradense*, *Volutoderma clatworthyi*, *Capulus spangleri*, *Anatina doddsi*, and *Serpula markmani* (48444).

COLTON, H. S., Philadelphia, Pa.: 3 specimens of *Venus mercenaria* chipped by shells of *Fulgur carica* (48791).

COMEAU, NAPOLEON A., Godbout, Quebec, Canada: Skin of an albino specimen of *Harelda hyemalis* (48583).

COMMERCE AND LABOR, DEPARTMENT OF: *Bureau of Fisheries*: Fishes, mollusks, and marine invertebrates collected by the steamer Spray, of Boston, during the winter and spring of 1906-7 (47586); a collection of fishes from the vicinity of Beaufort, S. C. (47593); dragon flies from the Mississippi basin, consisting of about 400 specimens and representing about 50 species (48625); 12 plants from Jo Davess County, Ill., collected by Messrs. Bartsch and Clark (47643); specimen of living cacti, *Opuntia*, from Tennessee, collected by Messrs. Bartsch and Clark (47739); 2 living plants collected in Tennessee by Messrs. Bartsch and Clark (47747); Alaskan salmon, collected by the steamer Albatross (47798); 5 crinoids, including 2 types of new species, collected by the Albatross (47929); types and cotypes of new species of fishes from Alaska (47988); 700 fishes from the Chester River, near Millington, Md., collected by Messrs. Goldsborough and Clark (48013); jawbones of a finback-whale, 72 feet

COMMERCE AND LABOR, DEPARTMENT
OF—Continued.

long, killed by Capt. J. S. Nickerson, Provincetown, Mass. (48039); about 192 fishes collected on the Pacific coast by the steamer Albatross, and in Georgia by Charles H. Bollman and Bert Fessler. The latter including the type of *Opsopædus bollmani* (48050); type specimen of a Japanese fish, *Caristius japonicus* (48051); mollusks, fishes, reptiles, batrachians, and crayfishes, and a specimen of Hemiptera from Devils Lake, N. Dak. (48083); skin and skull of a spermophile, *Citellus*, collected by E. L. Goldsborough from North Chautauqua Grounds, Devils Lake, N. Dak. (48085); 201 fishes collected in the Lake of the Woods and its tributaries in August, 1894, by A. J. Woolman, and 249 fishes from Kootenay Lake, British Columbia, obtained in August, 1898, by B. W. Evermann (48099); types, cotypes, and 3 specimens of fishes (48100); sea-urchins of the family Cidaridae, collected by the Albatross in 1887-88, 1891, 1900, 1902, 1904-5, and 1906, described by Alexander Agassiz and Hubert Lyman Clark (48133); fishes obtained in Maine and elsewhere in New England chiefly by W. C. Kendall (48171); a collection of corals collected by the Albatross in the northwest Pacific in 1906 (48285); type specimen of darter, *Hadropterus marinkuckiensis* (48313); fishes obtained by W. C. Kendall, chiefly in Maine (48320); 6 Japanese fishing boats, viz., 1 tunny fishing boat (Chiba-ken); 2 bonito fishing boats (Shizuoka-ken), and 3 yellow tail fishing boats (Kagoshima-ken) (48411); crayfishes from Lake Maxinkuckee and vicinity (48422); 58 specimens representing 11 species of crinoids, collected by the Albatross among the Hawaiian Islands in 1902 (48427); 40 type specimens of annelids, collected in 1900; bryozoans, worms, crustaceans, sponges, tunicates, and jellyfishes, collected in 1902 and

COMMERCE AND LABOR, DEPARTMENT OF—Continued.

- 1903 in Hawaii and Alaska (48447); 19 lots of holothurians, collected during the Alaska salmon investigations, 1903 (48492); 92 lots of parasitic copepods from various sources (48536); specimens of *Balanoglossus* from the Woods Hole region (48559); 2 specimens of pipe-fish, *Nerophis acqurorcus*, collected by Capt. Henry Eagleton, steamship Trojan Prince (48891); 113 vials of insects and insect larvae, and 3 lots of marine invertebrates, collected by field parties near Lake Maxinkuckee, Ind. (48904); starfishes, holothurians, and invertebrates from the North Pacific Ocean (48923).
- COMSTOCK EXTENSION MINING AND MILLING COMPANY, Carson City, Nev.: Specimen of fossil wood from Mount Davidson, Nev. (48041).
- CONRADT, A. F., Clemson College, S. C.: Specimen of *Alyson* sp. (48738).
- CONSTANT, OSCAR, Iberia, Ky.: Ceremonial object of banded slate (48701: purchase).
- CONZATTI, C., Oaxaca, Mexico: 16 living plants (47624, 47920, 47953, 48183); 6 specimens of living cacti, *Echinocactus mamillaria*, from Mexico (47579); 35 plants (47655, 47669, 47741, 47879); 2 specimens of *Mimosa lacerata* (47679); specimen of living plant, *Cissus* sp. (47889); 7 cuttings of *Cissus* (47974); 2 plants of the family Cactaceae, from Mexico (48007); 2 specimens of cacti, *Cereus*, from Oaxaca (48436).
- COOLIDGE, KARL R., Palo Alto, Cal.: 18 specimens of Lepidoptera (48308).
- COPELAND, E. B., Manila, Philippine Islands: 180 ferns, mainly from the Philippine Islands (48459).
- COPENHAGEN, DENMARK, ZOOLOGICAL MUSEUM: 21 specimens representing 10 species of Echini (48549: exchange).
- COSTENOBLE, H. L. W., Agaña, Guam: Sling stones, shell implements, mortars, adz blades, pestle, and shell chisels from the island of Guam, and shell money from the island of Yap (48520: purchase).
- COURT, EDWARD J., Washington, D. C.: Bird skin, the type of *Ardea herodias treganzae* (48606).
- COURTIS, WILLIAM M., Detroit, Mich.: Fern from Nevada (47960).
- COWPER, REV. FRED. C., Woodsville, N. H.: Drift bowlders (47906).
- COX, MISS EVA P., Washington, D. C.: Clam basket used by the Clatsop Indians (47808).
- COX, MISS HAZEL VAN ZANDT, Brightwood, D. C.: Young robin, *Planes-ticus migratorius* (47537).
- CRANDALL, S. W., Syracuse, N. Y.: Specimens of walkingstick, *Diapheromera femorata* (47791).
- CRANSTON, C. K., Pendleton, Oreg.: Young albino salmon, *Oncorhynchus chonticha* ? (47715).
- CRAWFORD, J. G., Albany, Oreg.: Cranium and fragmentary bones from a burial mound in Lincoln County, Oreg. (48526).
- CRAWFORD, LAMAR, New York City: Stone implements and arrowpoints from a mound and cavern near Meetze, Fauquier County, Va. (47753).
- CROSBY, C. R., Ithaca, N. Y.: 5 Microlepidoptera (47580).
- CROSS, WHITMAN, U. S. Geological Survey, Washington, D. C.: Lithological specimens from Shap Fell, Westmoreland, England (48019); corundum from Colorado and sandstone from England (48303).
- CURL, DR. H. C., surgeon, U. S. Navy, Washington, D. C.: A native shield from the interior of Queensland, Australia, and a club (langeel); head of a war club (star shaped) from New Guinea; and "kuditchi" shoes from Central Australia, made

- CURL, DR. H. C.—Continued.
of felted emu feathers and usually blood, and used in ceremonial witchcraft (47861); robin (*Planesticus migratorius*) showing a tendency toward albinism (48482).
- CURTIS, MISS DELIA, Windsor, Ontario, Canada: Old melodeon and an old silver watch (48146).
- CUSHMAN, J. A., Boston, Mass.: Crustaceans from the fresh waters of Labrador and Newfoundland, collected by Glover M. Allen and Owen Bryant (48100).
- CUTCHIN, N. E., Baltimore, Md.: 2 small ivory carvings (47005).
- DAVIDSON, A., Los Angeles, Cal.: Specimens of *Osmorrhiza* from California (47654); plant from the southern part of California (48085).
- DAVIS BROTHERS, Kent, Ohio.: 2 boxes of percussion "pills," which were extensively used later than gunflints and before the invention of percussion caps (48485: purchase).
- DAVIS, CHARLES A., Thorndale, Tex.: Specimen of Iceland spar (48032).
- DAVIS, WILLIAM T., New Brighton, Staten Island, N. Y.: (received through Dr. F. A. Lucas) Batrachians (47621).
- DAY, PHILIP, Black Warrior, Ariz.: Arrow-shaft straightener (48390).
- DAY, RICHARD H., Philadelphia, Pa.: Oriental package of "strike-a-light" flints, with 8 loose flints and steel (47862).
- DEAM, C. C., Bluffton, Ind.: 7 plants from Guatemala (47617); plant, *Laciniaria*, from Indiana (47922). Exchange.
- DEAN, F. A. W., Cleveland, Ohio.: Squid, *Loligo pealei*, from Marthas Vineyard, Mass., and 2 specimens of shells, *Siliqua patula nuttalli*, from California (47606).
- DEANE, RUTHVEN, Chicago, Ill.: 3 blackfin whitefish, *Coregonus nigripinnis*, from Green Lake, Wis. (48204).
- DEISHIER, H. K., Kutztown, Pa.: 9 photographs of baskets belonging to Mr. Deisher (48253).
- DELASHMUTT, MISS INEZ, Spokane, Wash.: Indian paint pot from New Mexico (48245).
- DENNETT, JOHN. (See under John Doan.)
- DIETZ, W. G., Hazleton, Pa.: 20 specimens of *Phycitinae* (48747: exchange); specimen of *Pyla bis-triatella* (48776); 9 cotypes of Microlepidoptera (*Ornia*) (47800).
- DOAN, JOHN, and JOHN DENNETT, Silverbell, Ariz.: Lizard, *Colonyx variegatus* (47982).
- DOBSON, DR. W. H. YEUNG KONG, Kwang Tung, China: Plant, *Drosera*, from China (48757).
- DOD, F. H. WOLLEY, Millarville, Alberta, Canada: 6 specimens of Lepidoptera, *Eubaphe immaculata* (48416).
- DODGE, BYRON E., Davison, Mich.: Stone pipe and grooved stone ax (12596: loan).
- DODGE, C. K., Port Huron, Mich.: 20 plants from Ontario and Michigan (48181); 10 plants from the region of Lake Huron (48777).
- DOUBLEDAY, MARY, ESTATE OF: Sword worn by Gen. Abner Doubleday during the Civil War. (48095).
- DOUGLAS, JAMES, New York City: 2 sections of stalactites from caves in limestone of the Warren district of Arizona (48275).
- DOWDLE, S. R., Waiakoa, Hawaiian Islands (received through the Bureau of American Ethnology): Collection of Hawaiian ethnological objects (12566: loan).
- DOWELL, PHILIP, Port Richmond, N. Y.: 14 ferns from New Jersey, New York, and other localities (48853).
- DOWLING, MRS. HARRIET L., Washington, D. C.: Archeological and ethnological objects from Mexico (48649: loan).

- DREW, Miss ROSA, Grinnell, Iowa: 32 specimens of plants, *Laciniaria*, from Iowa (47871).
- DUBLIN, IRELAND, FISHERIES BRANCH OF THE DEPARTMENT OF AGRICULTURE: Specimen of *Scorpaena cristulata* from the western coast of Ireland (48251).
- DUCHAUSSEY, A., Candebec-lès-Elbeuf, Seine Inférieure, France: 89 specimens of Hymenoptera (48340: exchange).
- DUDLEY, J. H., Hoquiam, Wash.: Hymenopterous insect, *Sirex albicornis* (47756).
- DUGÈS, A., Guanajuato, Mexico: Skull, wing, and leg of a bat, *Anoura geoffroyi* (47619); 25 insects (received through the Department of Agriculture) (47701); lenticular lichens from Mexico (48687); 3 plants *Baileya multiradiata* (48848).
- DUMBOLTON, C. J., Mabton, Wash.: Fragments of silicified wood from near Mabton (48588).
- DUNDEE, SCOTLAND, UNIVERSITY COLLEGE: Crab (*Uca*) (48540: loan).
- DUNLOP, T. W., Mason City, Iowa: Collection of supposed prehistoric stone objects from near Mason City (48029).
- DURANT, Miss LOUISIANA, Washington, D. C.: A very interesting collection of native utensils and implements obtained in South Africa by the donor, including a Kaffir piano, or Miramba (48879).
- DURY, CHARLES, Cincinnati, Ohio: 8 insects (47672: exchange).
- DUTT, H. L., Ithaca, N. Y.: Photograph of Mr. Dutt, a native of Calcutta, India (47648).
- DYAR, H. G., U. S. National Museum: 2 specimens of Hymenoptera from Tryon, N. C. (47638); 2 specimens of Lepidoptera, *Sphinx gordius* and *Apateia lanceolaria*, bred from larvae collected in Maine (48767).
- DYER, Mrs. FLORENCE M., Washington, D. C.: Silver armlet found in an Indian cemetery, Maumee Bay, near Toledo, Ohio (12471: loan).
- EASTWOOD, Miss ALICE, Berkeley, Cal.: 6 plants, *Ribes*, collected in California (48515).
- EDWARDS, J. E., Haystack, Oreg. (received through the Department of Agriculture): 2 specimens of cacti, *Echinocactus* (47989).
- EGGLESTON, W. W., Cambridge, Mass.: 65 plants from the northeastern part of the United States (47938: purchase).
- EGYPTIAN GOVERNMENT, Cairo, Egypt (through H. G. Lyons, director-general, survey department, Giza, Egypt): Fossil remains of *Arctiothecium zitteli* and other species (47878); (through the minister of education and Dr. G. A. Boulenger, of the British Museum of Natural History, London, England) 54 species of fishes from the River Nile and its tributaries (48252).
- ELBEUF, FRANCE, MUSÉE D'HISTOIRE NATURELLE: 132 specimens of Hymenoptera (47792: exchange).
- ELDER, H. C., Lester, Ark.: Petroleum from Camden, Ark. (48161).
- ELDER, THOMAS L., New York City: Collection of tradesmen's tokens or "store cards" (47789).
- ELLIOTT, Mrs. MINNIE J., Washington, D. C.: A copy of the Bible printed in 1599, silver spoon, glass saltcellar, and a tin treasure box of the colonial period (47773).
- ELLIS, MAX M., Winona Lake, Ind.: Mosquito larva, *Wyeomyia smithii* (47677).
- ELY, Mrs. H. A., Beverly, N. J.: Mounted specimen of bald eagle, *Haliaeetus leucocephalus*, from near Philadelphia (48139).
- EMMONS, Lieut. G. T., U. S. Navy (retired), Princeton, N. J.: 3 reed stalks used as sandpaper by the Indians of southeastern Alaska (48527).
- ENNIS, CARL E., Narcerosse, Fla.: Spider, *Gasteracantha cancriformis* (47865).

- EPPE, Miss EMILY, City Point, Va.: Plant from Trinidad, British West Indies (48006).
- ESHNAUR, Mrs. W. H., Los Angeles, Cal.: 7 specimens of *Haliotis* from the western coast of Mexico (?) (48802).
- ESTACION CENTRAL AGRONÓMICA. (See under Santiago de las Vegas, Cuba.)
- EWING, HERBERT S., Artesia, Cal.: 5 specimens representing 2 species of *Epipragmophora* from California (48445).
- EXPERIMENT STATION OF THE HAWAIIAN SUGAR PLANTERS' ASSOCIATION (Division of Entomology), Honolulu, Hawaii: Moths, *Cirphis unipuncta*, *Caradrina recalsa*, and *Cryptolabes* sp. (48270).
- FALL, H. C., Pasadena, Cal.: 2 specimens of *Ctenophagus debilis* (48881; exchange).
- FALLIS, Miss EDWINA H., Denver, Colo.: 2 mats illustrating samples of weaving, and a basket (48210).
- FAWCETT, H. S., Gainesville, Fla.: 3 orchids from Florida (47962).
- FAY, H. W., De Kalb, Ill.: Photographs illustrating the exhuming of mastodon bones near De Kalb (48804).
- FELT, Dr. E. P., state entomologist, Albany, N. Y.: 3 Japanese tortricids, *Archips sorbiana* (48394).
- FENYES, Dr. A., Pasadena, Cal.: Adult and 2 larvae of *Plasteros* n. sp. (near *sanguinicollis*); adult and 5 larvae of *Aphorista morosa* from Porvenir, N. Mex. (48231); 37 specimens representing 11 species of Aleocharinae (48489); about 3,000 insects collected at Cordoba, Mexico (48885).
- FERNALD, M. L., Cambridge, Mass.: 122 plants from Quebec (48424; purchase).
- FERNEKES, VAL., Milwaukee, Wis.: 12 specimens of Lepidoptera (48164).
- FIELD, G. H., and W. S. WRIGHT, San Diego, Cal.: 16 specimens of Lepidoptera (48796).
- FIELD, Mrs. WILLIAM DE Y., Mattapoisett, Mass.: 3 eggs of the lacewing fly, *Chrysopa* sp. (47562).
- FIELD MUSEUM OF NATURAL HISTORY, Chicago, Ill.: Plant, *Nolina*, from Mexico (47572; exchange); collection of arctic clothing worn by members of the Greely Relief Expedition; also sleeping bag, canvas straps, etc. (47967); frogs from Guatemala (48287); 300 plants from the United States and the West Indies (48334; exchange); 326 specimens of willows, *Salix* (48451; loan).
- FINK, Prof. BRUCE, Oxford, Ohio: 437 lichens from Minnesota (47931); 125 specimens of lichens collected mainly on Plummers Island, Montgomery County, Md., in 1907 (48504).
- FINLEY, JOHN, Dowagiac, Mich.: Moth, *Eucles imperialis* (47581).
- FISH, Mrs. NICHOLAS, Washington, D. C.: Chair brought by Mr. Fish from Morro Castle, Cuba, and a beaded Indian cane which belonged to Sergt. Hamilton Fish (48871); flounce of Brabant (Flemish) lace (48873; loan).
- FISHER, Miss M. J., Denton, Md.: 3 plants from Porto Rico, *Guarea trichelloides*, *Jatropha multifida*, and *Zephyranthes* ? (47790).
- FITZSIMONS, F. W., director Port Elizabeth Museum, Port Elizabeth, Cape Colony, South Africa: 8 photographs of skulls of Layard's beaked whale, *Mesoplodon bayardi*, and one of the exterior (47866).
- FLEMING, J. H., Toronto, Ontario, Canada: 9 birds' skins from Chat-ham Islands (48227; exchange).
- FLETCHER, Dr. JAMES, Ottawa, Canada: Moth, *Nymphula oblitalis* (48521).
- FOERSTE, A. F., Dayton, Ohio: About 500 specimens of fossil bryozoans illustrating the Mississippian formations of Kentucky (47885); about 500 fossils from the same formation (48024).

- FOHL, MARY E., Greenville, Ky.: Larva of hickory-horned devil, *Cithronia regalis* (47612).
- FOOTE MINERAL COMPANY, Philadelphia, Pa.: Specimens of hydromagnesite from California; edingtonite from Sweden; tapiolite from France; and calcioval borithite from Colorado (48577: purchase).
- FORD, Dr. W. HUSTON, Washington, D. C.: A 40-pound cannon ball, which was fired at a floating battery on April 12, 1861, by Major Anderson, in command of Fort Sumter, Charleston Harbor (48355).
- FRANKLIN, H. J., Amherst, Mass.: Copies of *Anothrips gowdeyi* and *Euthrips insularis*, mounted on 5 slides (48162).
- FREBURGER, GEORGE A., Baltimore, Md.: Cane cut from a chaparral bush by the donor during the war with Mexico (47816).
- FREEMAN, C. E., Parang, Mindanao, P. I.: Fly, *Sarcophaga* sp. (47634).
- FREEMAN, Miss HELEN, New Bedford, Mass.: 13 boxes of natural history and ethnological specimens, which belonged to the late Willard Nye, jr. (48696).
- FRENCH, Rev. J. L. and LÉON L. L., Washington, D. C.: Historical and other relics (48686: loan).
- FRIERSON, L. S., Frierson, La.: 4 specimens of *Lampsilis texascensis* from Louisiana or eastern Texas (47604).
- FRISBIE, D. G., Norris, Mont.: Magnetite sand containing monazite (48418).
- FROST, C. A., South Framingham, Mass.: 76 specimens of Lepidoptera (47802).
- FULLAWAY, DAVID J., Stanford University, Cal.: 3 mosquitoes and 2 slides of insects from Yosemite Valley, Cal. (47640).
- FULTON, H. C., Riverside, Kew, London, England: Specimen of *Turbonilla* from Florida (47705).
- GABY, C. W., Osceola, Nev.: Lower jaw (fossil) of a horse, apparently *Equus occidentalis* (48193).
- GAILLARD, Maj. D. D., U. S. Army, Culobra, Canal Zone: Small bag woven from a fiber plant, made by the Indians of Los Remedios, Province of Chiriqui, Republic of Panama (48142).
- GAILLARD, R., Mobile, Ala.: Phyllopod crustacean from a hydrant (48298).
- GARDNER, Hon. A. P., House of Representatives, Washington, D. C.: Photograph of an Algonquian horn spoon, an heirloom in the Gardner family of Massachusetts (48036).
- GARRETT, J. J., Lumsford, Ark.: 2 specimens of the American hercules beetle, *Dynastes titus* (47830).
- GATES, FRANK C., Chicago, Ill.: 300 plants from Illinois and Wisconsin (48240: purchase).
- GEARHART, GEORGE W., Ashland, Pa.: Anthracite coal from Schuylkill County, Pa. (48312).
- GEE, Prof. N. Gist, department of science, Soochow University, Soochow, China: Collection of Chinese medicines, comprising about 500 kinds (48443).
- GEOLOGICAL SURVEY. (See under Ottawa, Canada.)
- GIACORNELLI, Dr. EUGENIO, La Rioja, Argentina, South America: Butterflies from Argentina and Europe (48900: gift and exchange).
- GIBSON, R. L., Alameda, Saskatchewan, Canada: Specimen of *Inoceramus sagensis* from the Fort Pierre (Upper Cretaceous) formation (48793).
- GILBERT, Mrs. A. P., Logan, Okla.: Specimen of praying mantis, *Stagmomantis carolina* (47927); specimen of walking stick, *Parabacillus palmeri* (48015).
- GILBERT, CHESTER G., South Bethlehem, Pa.: 476 grams of meteorite from Estacado, Tex. (47563: exchange).
- GILLETTE, C. P., Fort Collins, Colo. (through Dr. H. T. Fernald): Type of *Deromyia pulchra* (47985).

- GIRAULT, A. A., Urbana, Ill.: 3 cotypes of *Tritoneptis hemerocampae* (Hymenoptera) and 4 unnamed specimens (48600).
- GODMAN, F. D., London, England: A set of the beetles from Central America which were used by the donor in connection with his monumental work entitled "Biologia Centrali Americana" (48314); 746 specimens of Rhynchota and Formicidae from Central America, selected from the Biologia Centrali Americana collections (48598).
- GODWIN, I. R., Fincastle, Va.: Jaw of woodchuck, *Marmota monax*, with overgrown incisors (47743).
- GOLL, GEORGE P., Washington, D. C.: 3 specimens of *Pseudomelania obeliscus* from Lake Yzabal, Guatemala (47884); reptiles, 2 fresh-water crabs and shells from Guatemala (48398).
- GOTTSCHALK, A. L., United States consul-general, Mexico: 14 picture postals representing Mexican ethnological subjects (47647).
- GOWARD, GUSTAVUS, Washington, D. C.: Samoan wedding mat (48888; purchase).
- GRAHAMSTOWN, CAPE COLONY, SOUTH AFRICA, ALBANY MUSEUM: 143 plants from South Africa (47696; exchange).
- GRAYSON, G. W., Eufaula, Okla.: Photographs of Creek Indians (48760).
- GREEN, H. A., Tryon, N. C.: Specimens of tabular quartz, asbestos, and shells (47758).
- GREGG, D. K., Perkins, Okla.: About 15 species of land and fresh-water shells from Oklahoma (48810); 33 specimens, representing 6 species, of land and fresh-water shells from Oklahoma (48919).
- GRIDLEY, MRS. ANN E., Washington, D. C.: Silk handkerchief bearing a picture of the late Capt. Charles V. Gridley, U. S. Navy (48648).
- GRIGGS, R. F., Columbus, Ohio: Fern, *Asplenium pinnatifidum*, from Ohio (48756).
- GRIMES PASS PLACER MINING COMPANY (LIMITED), Boise, Idaho: Black sand (48178).
- GRIMES, WARREN, U. S. National Museum: 3 United States 1-cent pieces (48731); a silver coin and a copper coin (48842).
- GRINNELL, JOSEPH, Pasadena, Cal.: Lizard from California (48044); 12 bird skins from California (48066); 43 mammals and 295 plants from the southern part of California (48539; 48686); 19 insects (48739).
- GROUT, Dr. A. J., Brooklyn, N. Y.: 25 specimens of mosses (48580; purchase).
- GUADAGNO, MICHELE, Naples, Italy: 110 European plants (48452; exchange).
- GULF BIOLOGIC STATION, Cameron, La.: 5 specimens, representing 3 species, of parasitic copepods, and 20 vials of decapod and isopod crustaceans (48246); 2 specimens of Cumacea (48367); 13 specimens, representing 2 species, of Schizopods (48431).
- GUTEKUNST, F., Philadelphia, Pa.: Photographic portrait of Prof. Joseph Henry (47995).
- HAARLEM, NETHERLANDS, TREYLER'S MUSEUM: Cast of skull and skin fragment of *Zuglodon hydrarchus* (48518; exchange).
- HAAS, ALBERT, Washington, D. C.: Dark lantern used during the civil war in Armory Square Hospital, Washington, D. C. (47682).
- HAASE, LEO G., Pasadena, Cal.: Concretions from the Miocene of San Pedro, Cal. (47694); vertebra of a fossil whale, and 3 photographs (47881).
- HAHN, WALTER L., Mitchell, Ind.: 18 mammals from near Washington, D. C. (48415; collected for the Museum).

- HAINES, ALFRED S., Westtown, Pa.: 96 plants from Pennsylvania (47551: 48570).
- HALLIDAY, CHARLES H., contract surgeon, U. S. Army, Manila: 16 insects from Fort Pikit, Mindanao, P. I. (47633).
- HAMLIN, HOMER, Los Angeles, Cal.: Fragments of vertebrate fossils (47895); fragments of jaws and teeth of a species of camel, probably somewhat larger than *Camelops kansanus* (48014).
- HANCOCK MUSEUM. (See under Newcastle on Tyne, England.)
- HANDY, L. C. (See under Otto L. Veerhoff.)
- HANNIBAL, HAROLD, San Jose, Cal.: 2 species of Nalads, *Gonidea angulata* and *Anodonta irahameticensis*, from San Jose (47883); marl containing specimens of *Bythinella* from the Pliocene of Santa Clara Valley (47969); fresh-water shells (48194).
- HARDY, ISAAC B., Santa Clara, Cal.: 16 specimens, representing 5 species, of marine shells (48020).
- HARLAN, MRS. JAMES S., Washington, D. C.: Collection of embroideries, enamels, carving, and other art objects (48798; 48846). Loan.
- HARPSWELL LABORATORY, Harpswell, Me. (through Dr. F. D. Lambert, Tufts College, Mass.): 3 specimens of isopod, *Idothea metallica*, from Georges Bank (48678).
- HARRIS, C. M., San Diego, Cal.: 9 photographs of the elephant seal, *Macrorhinus angustirostris* (47728).
- HARRIS, DR. JESSE R., U. S. Army, Fort Assiniboine, Mont.: Set of Moro gongs (47542; purchase); collection of Moro ethnological objects (47543); 21 Moro cartridges (47558).
- HARRIS, JOSEPH, Tampico, Mexico: Skin of Central American mountain deer, *Mazama satorii* (48269).
- HARRIS, DR. J. V., Key West, Fla.: 4 scorpions (48619).
- HART, C. A., Urbana, Ill.: 3 specimens of isopod, *Porcellio* sp., from Texas (48565).
- HART, J. H., botanical department, Trinidad, British West Indies: Skin of a little collared swift, *Panyptila cayennensis* (48792).
- HASSE, DR. H. E., Sawtelle, Cal.: Plant, *Crepis*, from Arizona (47588); 8 specimens of living cacti, *Opuntia*, from California (47799; 47916).
- HAWLEY, W. A., Santa Barbara, Cal.: 7 specimens of *Pecten bellus* from the Pliocene, 4 miles west of Santa Barbara (48132).
- HAY, W. P., Washington, D. C.: Tree toads from Dorchester County, Md. (47000).
- HAYDEN, DR. F. V., ESTATE OF (through Dr. A. C. Peale): Rocks and vertebrate fossils (48277).
- HEDGEEMAN, EDGAR B., Berwyn, Md.: Larva of a hag moth (47684).
- HEDLEY, CHARLES, Australian Museum, Sydney, New South Wales: About 125 specimens, representing 34 species, of marine shells from Masthead Island, Queensland, mostly cotypes of species described by the donor (48481).
- HELLER, A. A., Los Gatos, Cal.: 470 plants from California (47636; 48057); 29 plants, *Ribes*, from California (48479; purchase).
- HENDERSON, Hon. JOHN G., Lake View, Ill.: Stone object from Illinois, known as a "boat anchor" (48841).
- HENRY, The Misses, Washington, D. C.: 4 Indian pictures by Stanley, and 1 by an unknown artist (48404).
- HENSHAW, H. W., Washington, D. C.: 6 ferns from Massachusetts (47930); 3 birds' nests from California (48388).
- HERDMAN, DR. W. A., Liverpool, England: Cotypes of parasitic copepods from the pearl banks of Ceylon (48544).

- HERRERA, A. L., Mexico, Federal District, Mexico: 3 species of land shells from Mexico (47897).
- HERRICK, Glenn W., Agricultural College, Miss.: Plant, *Viburnum*, (48279); 4 adults and 3 larvæ of a Hymenopteron, *Lophyrus pinctum*, (48450).
- HERRIOT, W., Galt, Ontario, Canada: 41 plants collected in Canada during 1906 (48566).
- HETH, Miss NANNIE RANDOLPH, Washington, D. C.: China and cut glassware used at Mount Vernon by General and Mrs. Washington (12549: loan).
- HEYK, GEORGE G., New York City: 83 ethnological specimens from different sections of the United States and Canada (48318: exchange).
- HIBBS, W. C., Washington, D. C.: Specimen of *Corydalis cornuta* from Washington, D. C. (48897).
- HINKLEY, A. A., Dubois, Ill.: 6 cotypes of *Pyrgulopsis wabashensis* n. sp. (48174).
- HIRASE, Y., Kioto, Japan: 272 specimens, representing 56 species, of land shells from Japan (48913: purchase).
- HITCHINGS, E. F., Augusta, Me.: 2 cocoons of *Halsidota maculata* (47858).
- HITTINGER, Sergt. J. J., Exposition Station, Jamestown, Va.: Nails from a house built in Virginia in 1640 (47851).
- HOBSON, Mrs. ELIZABETH C., Washington, D. C.: 2 yards of Mechlin lace (1800) and a piece of point de Milan (48802: loan).
- HOCHDERFFER, Col. GEORGE, Flagstaff, Ariz.: 2 specimens of cactus, *Opuntia echinocarpa*, from Arizona (48828); 5 specimens of cacti from Arizona (48883).
- HOGG & McDOWELL, Washington, D. C.: Partridge, *Colinus virginianus*, in abnormal plumage (48343); a goose egg of unusual size (48558).
- HOLCOMB, BENTON, Simsbury, Conn.: 5 specimens, representing 2 species, of fresh water shells (48430).
- HOLLISTER, N., Delaware, Wis.: 10 specimens of Nymphaceae from Wisconsin (47702).
- HOLM, THEODOR, Brookland, D. C.: 14 plants from Vermont and the vicinity of Washington, D. C. (47602); 8 plants (47710; 47770); 5 plants from near Brookland (47876); tubers of *Dioscorea illustrata*, cultivated at Brookland, D. C. (47961); 90 specimens of European plants, Umbelliferae, Crassulaceae, and Juncaceae (47792: exchange); alcoholic material of 3 species of plants from Florida and Washington (48200); a jar of plants from the District of Columbia (48065); 5 plants, *Dentaria diphylla*, from Vermont (48752).
- HOLMES, J. S., Washington, D. C.: Double-headed snake from Kentucky (48084).
- HOPE GARDENS. (See under Kingston, Jamaica.)
- HOPKINS, A. C., Charlestown, W. Va.: Leaf beetle, *Monocasta coryli* (47723).
- HORNOR, SAMUEL STOCKTON, Carnesville, Ga.: Arrow point from near Dobb's Bridge, Franklin County, Ga. (48063).
- HOUGH, E. C., Falls Church, Va.: Specimen of fasciated *Rudbeckia hirta* (47659).
- HOUGH, WALTER, U. S. National Museum: Plaster cast, painted, of the bust of a boy. Replica by August Gerber, of Cologne, of the terra cotta original by Luca della Robbia, 1400-1482 (48120).
- HOWARD, L. O., Department of Agriculture, Washington, D. C.: 190 named specimens of European Hymenoptera, comprising 86 species (48863).
- HOWARD UNIVERSITY, Medical School, Washington, D. C.: Anatomical specimens (48235).

HOWELL, E. E., Washington, D. C.: Piece of meteoric iron from Williamstown, Ky. (gift), and a piece of a meteorite from Ainsworth, Nebr. (exchange) (48432); 2.270 grams of the Crab Orchard meteorite (48925; purchase).

HRDLÍČKA, DR. ALEŠ, U. S. National Museum: Bird's nest (47635).

HURBY, Miss ELLA F., Pasadena, Cal.: Photographs of baskets and samples of basketry stitches made by a Pomo Indian (48305).

HUGHES, Mrs. FLORENCE A., Washington, D. C.: Singing house mouse, *Mus musculus* (48554).

HUNGARIAN NATIONAL MUSEUM. (See under Budapest, Hungary.)

HUNGATE, J. W., Cheney, Wash.: 9 specimens of Coleoptera (47614).

HUNT, J. B., Topeka, Kans.: Ores and fossil invertebrates from Kansas and Missouri (48593).

HUNTER, CLAY, Blue, Ariz.: Skin and skull of shrew, *Notiosorex crawfordi* (47877); "white-footed" mouse, or "deer mouse," *Peromyscus boylii roulei* (48225).

HURTER, JULIUS, St. Louis, Mo.: Reptiles and batrachians from Arizona and New Mexico (47820); salamander from Stone County, Mo. (47998); reptiles and batrachians chiefly from Arizona and New Mexico (48055); frog from California (48788).

INGHAM, Mrs. E. C., San Fernando, Cal.: Living cactus, *Opuntia*, (48324).

INSCHIO, SAMUEL S., Elmira, N. Y.: Fossil invertebrates from East Bethany, N. Y. (48200).

INSTITUTO DE MANGUINHOS. (See under Rio de Janeiro, Brazil.)

INSTITUTO SÉRUMTERAPICO DO ESTADO DE SÃO PAULO. (See under São Paulo, Brazil.)

INSTITUTO MEDICO NACIONAL. (See under Mexico, Mexico.)

INTERIOR, DEPARTMENT OF:

Patent Office: Firearms, models of various inventions, etc. (48865); models relating to the history of photography (48866); models relating to the development of musical instruments (48889); models relating to the development of lighting and heating (48890).

U. S. Geological Survey: Collection of surveying instruments, obsolete forms (47736); 2 aluminum benchmark tablets (48003); vertebrate fossils from the Red Beds of Texas, collected by Messrs. Adams and Ulrich (48151); vertebrate fossils from the Upper Cretaceous and Lower Eocene (Puerco and Wasatch) from the San Juan basin, New Mexico, collected by J. H. Gardner (48154); rocks from the Brackett, Uvalde, and Austin quadrangles of Texas, collected by T. Wayland Vaughan and associates (48236); 3 Hymenoptera, yellow jacket, and parasitic worms (48243); fossil bones of the Miocene age from Los Angeles, Cal. (48291); rocks collected by E. S. Bastian from the Fox Islands, and illustrative of the Penobscot Bay folio (48337); instruments used by the Western Resources branch of the survey in the work of measuring the flow of streams (48341); vertebrate fossils, chiefly Mesozoic, obtained in 1907 by field parties in Wyoming, Montana, and North Dakota (48345); sample of halloysite from Indiana (48369); 3 varieties of an extinct bison, and an astragalus of elephant, probably *Elephas columbi*, and apparently Pleistocene, collected by C. E. Siebenthal near Duenweg, Joplin district, Missouri (48387); rocks and thin sections from the Rockland quadrangle, Maine, collected by Edson S. Bastian (48400); types of 10 new species and 1 new variety of Carboniferous invertebrate fossils (48500); reserve and duplicate rocks and ores, with thin

INTERIOR, DEPARTMENT OF—Continued.
sections, from the Cœur d'Alene district, Idaho (48543); 75 specimens of typical rocks of the Redding quadrangle, California, and 60 thin sections, collected by J. S. Diller (48587); meerschaum from the Dorsey deposit in the canyon of Bear Creek, Grant County, N. Mex., collected by Douglas B. Sterrett (48681); rock slab with undetermined fossils, from Glade Run, Warren quadrangle, Pennsylvania, collected by Mr. Charles Butts (48698); natural cast of chimaeroid egg case, collected by N. H. Darton, in 1906, from the lower sandstone of Montana formation 20 miles from Laramie, Wyo. (48730); about 20 drawers of Paleozoic graptolites (48733); 2 vertebrae of a fossil reptile collected by C. H. Gordon in the Upper Cretaceous, 2 miles north of Washington, Ark. (48852); bryozoans from New Hanover and Brunswick counties, N. C. (48887).

U. S. Reclamation Service: Fossil bones discovered while excavating in connection with the Umatilla project, Oregon, and at Cold Springs Dam (47765).

INTRAM, ROBERT, Signal, Ariz.: Arizona coral snake, *Elaps curycanthus*, (48034).

ISHAM, CHARLES BRADLEY, New York City: 3 birds' skins from Virginia (48817).

ISTHMIAN CANAL COMMISSION, Washington, D. C.: Rock specimens from the Isthmus of Panama, collected by Mr. Howe, geologist of the commission (47591; exchange).

JAMES, MRS. JULIAN, Washington, D. C.: Collection of laces (48709); collection of French, Italian, Dresden, and other chinaware, miniatures, and other art objects (48822; loan).

JAMES, OLIN T., St. Louis, Mo.: Game of national history (57 cards) and a book of rules for playing the game (47726).

JAMESTOWN TERCENTENNIAL EXPOSITION, U. S. GOVERNMENT BOARD: Models of the Savannah, Clermont, and Phoenix, a primitive sledge, and a farm sled; 2 models of railway tracks and 2 models of Starr carbines (48783).

JARDIN BOTANIQUE DE L'ÉTAT. (See under Brussels, Belgium.)

JENNEY, CHARLES E., Fresno, Cal.: 4 Coleoptera (47570); 6 species of marine shells from the West Indies and the Indo-Pacific region (47584); 5 species of Coleoptera and Hemiptera (47714); 11 species of land and marine shells (48505); specimen of *Nassa* from the Fiji Islands (48620); 2 specimens of Hymenoptera, *Bombus* sp. (48790).

JENNINGS, A. H., Ancon, Canal Zone, Panama: About 275 specimens of mosquitoes (48838).

JEWETT, STANLEY G., Portland, Oreg.: Bat, *Myotis lucifugus longicus*; young wood rats, *Neotoma*; lizard, *Sceloporus undulatus occidentalis*; snake, *Charina plumbca*; skulls of a common cat, *Felis domestica*, and a spotted skunk, *Spilogale phocaris latifrons*; 2 minks, *Lutreola vison* (47762); skins and skulls of 5 mammals (47925); 6 skins and skulls of mammals from Oregon and Washington (48056).

JOHNSON, C. H., Exposition Station, Norfolk, Va.: An ancient corn pounder from Massachusetts (47611).

JOHNSON, H. L., Clarksville, Tenn.: 5 flint implements from Kentucky and Tennessee (48484; exchange).

JONES, F. A., Washington, D. C.: Specimen of a star-nosed mole, *Condylura cristata* (48656).

JONES, FRANK MORTON, Wilmington, Del.: 2 cotypes of *Callosamia angulifera* var. *carolina*, with their cocoons (48676).

JONES, GILBERT, Pittston, Pa.: Specimen and a thin section of middle-tonite (47592).

- JONES, JOSEPH W., Bristol, Tenn.: 2 plugs of Sally Lund tobacco, manufactured in Richmond by A. W. Taylor (47807).
- JONES, MARCUS E., Salt Lake City, Utah: Specimen of cactus, *Opuntia*, from Utah (48022); 31 living plants from Utah (48000, 48827); 3 specimens of living cacti, *Opuntia fragilis*, from Sandy, Utah (48680).
- JORDAN, DAVID STARR, Stanford University, Cal.: 5 fossil fishes from Ceará, Brazil (48015).
- JOUTEL, LOUIS H., New York City: 17 specimens of *Iguanus acinigmaticus* (48304; exchange).
- JOUY, MRS. M. S. F., U. S. National Museum: Birds collected by the late Pierre L. Jouy, chiefly in the United States (48148); stone implements and a plaster mold of an archeological object (48872).
- JUSTICE, DEPARTMENT OF: A collection of the scalps, skulls, and antlers of the American elk from the Jackson Hole region, Wyoming, used as evidence in a federal trial against poachers in September, 1907 (48821).
- KEARFOTT, W. D., Montclair, N. J.: Tortricids, representing large types of new species (48567); 4 cotypes of prionapterygid crambids (48748); 20 specimens of Lepidoptera, cotypes of 6 new species (48816).
- KEEN, J. H., Metlakatla, British Columbia: Indian skull from Kamanawal, British Columbia (47913).
- KEENAN, MICHAEL, Springer, N. Mex.: 15 pseudo-scorpions, *Chelifer caneroides*, (47934); a house mouse, *Mus musculus*, and a house sparrow, *Passer domesticus* (48048).
- KELLERMAN, W. A., Los Amates, Guatemala, Central America: Seeds of cacti (48380).
- KEMEYS, MRS. LAURA SWING, Washington, D. C.: 94 animal sculptures in plaster and bronze, by Edward Kemeys (48170; loan).
- KENKEL, LOUIS V., Muskegon, Mich.: Star-nosed mole, *Condylura cristata* (47590).
- KENNEDY, P. B., Reno, Nev.: 349 plants from Nevada (48325; exchange); 51 plants, *Ribes* (48867; loan).
- KENT, JOSEPH G., Tuba, Ariz.: Samples of cotton, with stems and roots, cultivated by the Hopi Indians (48117).
- KEEN, D. N., Allentown, Pa.: Stone implements from a quarry near Vera Cruz, Lehigh County, Pa., with photographs and a printed description (47727); 15 arrow points (47924).
- KEW, LONDON, ENGLAND, ROYAL BOTANIC GARDENS: A frond from the type specimen of *Asplenium fluekii* from Mexico (48031); 6 fragments of type specimens of plants, *Dalca* (48546; exchange). (See under Calcutta, India.)
- KILMER, F. B., New Brunswick, N. J.: Ethnological objects from various localities, and a sponge with oyster shells attached (48004).
- KIMBALL, LAURA F., National City, Cal.: 10 living specimens of fern, *Asplenium respertinum*, from California (48500).
- KING, A. F. A., Washington, D. C.: Furnace slag (48157).
- KINGSTON, JAMAICA, DEPARTMENT OF PUBLIC GROUNDS AND PLANTATIONS, HOPE GARDENS: Fern from Jamaica (48471; exchange).
- KINGSTON, ONTARIO, CANADA, Queen's University: 224 plants from Canada (48352; exchange).
- KNAB, FREDERICK, Department of Agriculture, Washington, D. C.: 53 specimens of insects (47632); specimen of Coleoptera, 11 specimens of Orthoptera, and about 20 cocoons of Lepidoptera (48219; collected for the Museum); 17 specimens of Hemiptera and 49 of Hymenoptera (47880); hymenopterous parasite of *Parasa* sp. from Cordoba, Veracruz, Mexico (48627).
- KNEUCKER, A., Baden, Germany: 40 plants, Cyperaceae and Juncaceae exsiccatae (47709; exchange).

- KNIGHT, HILLES J., San Francisco, Cal.: Tooth of a sea-elephant (?), *Mirounga angustirostris* (?), from the mouth of Gualala River, Cal. (47914).
- KNY-SCHNEIDER COMPANY, New York City: 2 specimens of Lepidoptera, *Maroga scitotricha*, from Queensland, Australia (48462).
- KÖNIGL. ZOOLOGISCHES MUSEUM. (See under Berlin, Germany.)
- KOROSTOWETZ, WLADIMIR, Station Radoule, Propriety Peressage, Government of Tchernigof, Russia: Fragmentary specimens of Kourgan pottery (48001: exchange).
- KRANTZ, DR. F., Bonn, Germany: About 2,500 specimens, representing 410 species, of Paleozoic trilobites and brachiopods (48116: exchange).
- KREFFT, H., Paddington, New South Wales, Australia: Photograph of a diamond snake from Australia (47557).
- KUEHLING, J. H., Mount Vernon, Va.: Snake, *Diadophis*, from Virginia (48758).
- KUNZE, R. E., Phoenix, Ariz.: 2 specimens of living cactus, *Opuntia*, from Colorado (47623); 5 specimens of cactus, *Opuntia kunzei*, from Arizona (47680); specimen of living cactus, *Opuntia kunzei*, from Arizona (47731); specimen of cactus, *Opuntia chloratica*, from Arizona (47806); beetle, *Macrobasis ochrea* (47834); a living plant, *Stylophyllum*, from California (47962); 4 cacti, *Opuntia*, from Arizona (48229).
- LACEY, HOWARD, Kerrville, Tex.: 7 skulls of mammals (47853); specimens of *Mamillaria heyderi* and *Echinocercus cacsipitosa* (48110); gray squirrel, *Sciurus durangi*, Apache squirrel, *Sciurus apache*, and Gila chipmunk, *Eutamias dorsalis* (48114).
- LAMB, DR. D. S., Army Medical Museum, Washington, D. C.: 2 skeletons and a brain (48101); deformed skull of an unknown Indian, and the brain of a white man (48233); anatomical specimen (48316); anatomical specimen (48589).
- LAMKESTER, C. H., San José, Costa Rica (through William Schaus): A collection of insects, chiefly Coleoptera, from the Atlantic slope of Costa Rica (47781).
- LARRIERE, E. P. R., Huachuca Siding, Ariz.: Gila monster, *Holodermis horridum*, from Mexico (48321).
- LAUSANNE, SWITZERLAND, BOTANICAL MUSEUM OF THE UNIVERSITY: 310 plants from Central Europe and Mediterranean countries (48058: exchange).
- LAWTON, FRITZ HAMILTON, Rincon Antifio, Oaxaca, Mexico: Hemipteron, *Leptoglossus dilatocollis* (48348).
- LAY, MRS. RICHARD G., Washington, D. C.: 14 pieces of antique art textiles, including 9 boxes (48807: loan).
- LEE, WILLIS T., U. S. Geological Survey, Washington, D. C.: Sample of halotrichite from Blossom mine, near Cedaredge, Colo. (48040).
- LEEDS, MRS. EMILY L., Roxbury, Mass.: Blue china fruit dish and platter (12584: loan).
- LÉGER, J. N., envoy extraordinary and minister plenipotentiary from Haiti, Washington, D. C.: 104 models of Haitian fruits and vegetables (48854).
- LE HARDY, J. C., contract surgeon, U. S. Army, Savannah, Ga.: Skin and 2 skulls of tamarao; skin and 7 skulls of Philippine deer; skin of a crocodile (47722).
- LEIBERG, J. B., Leaburg, Oreg.: Specimen of moss from Arizona (48250).
- LEIPZIG, GERMANY, STÄDTISCHES MUSEUM FÜR VÖLKERKUNDE: Collection of ethnological material from Togo and Senegambia, Africa (48585: exchange).

- LELAND STANFORD JUNIOR UNIVERSITY, Stanford University, Cal.: 2 specimens of *Rimicola muscarum*, collected by Dr. Harold Heath at Pacific Grove, Cal. (48069); crabs, *Cancer antennarius*, *C. jordani* and *C. gibbosulus* (48384); types and cotypes of fishes from Japan, Mexico, California, and the Philippine Islands (48469); fishes from Japan, Hawaii, California, and other localities (48924).
- LENS, MISS ALBERTINE, Utrecht, Holland: 3 specimens of *Pliocercus lanuginosus* from Curaçao (48825).
- LEON, Brother, Colegio de la Salle, Vedado, Habana, Cuba: 30 Cuban ferns (48516).
- LEONARD, AUGUST, Batavia, Ark.: 5 small arrowpoints (48301).
- LE SOUTER, W. H. D., director, geological survey, Melbourne, Australia: Stone hatchet from a shell kitchen-midden near Sorento, Victoria (47763; exchange).
- LEWIS, A. E., jr., Washington, D. C.: Centipede from Arkansas (47717).
- LEWIS, BENTON, U. S. National Museum: 5 specimens of living cacti cultivated in Washington, D. C. (47637).
- LEWIS, Lieut. GEORGE C., U. S. Army, Mindanao, P. I.: 2 skulls of monkeys, *Macaca*, 5 shells and 7 acorns from Lake Lanao, Mindanao (48958).
- LINTON, EDWIN, Washington, Pa.: Types and cotypes of parasites of Bermuda fishes (48087).
- LITTELL, C. F., Austin, Nev.: Specimen of cactus, *Opuntia polyacantha* (48136).
- LLOYD, F. E., Tucson, Ariz.: 48 living specimens of Mexican cacti (48667); 2 specimens of living cacti, *Mamillaria thurberi*, from Arizona (48697).
- LLOYD, Mrs. K., Richmond, Va.: Piece of ticking showing natural feathering from long use (48289).
- LODING, H. P., Mobile, Ala.: 6 specimens of Coleoptera (48626).
- LONDON, ENGLAND, BRITISH MUSEUM OF NATURAL HISTORY: 95 Orthoptera (48173; exchange).
- LOPEZ, JOSEPH O., Maynard, Md.: Interhaemal bone of a spade-fish, *Chaetodipterus faber* (48053).
- LORING, Mrs. MALEK A., Chicago, Ill.: Remington revolver, holster, and belt, formerly owned by Mr. Loring, 1862-1907 (47923).
- LOUNSBURY, CHARLES P., government entomologist, Cape Town, South Africa: 6 bees (47745).
- LOVE, ROBERT E., Erwin, Tenn.: Stone implements (48808).
- LOVELL, F. H., & Co., Arlington, N. J.: A Hitchcock lamp (48875).
- LOVETT, EDWARD, Croydon, England: 2 specimens of fishing gear from the coast of Galway, Ireland (48098); set of Maundy money, 1908 (48688; exchange).
- LOWE, FRED. B., Melrose Highlands, Mass.: 13 mosquitoes, *Aedes cantator* (48763).
- LOWNDES, Mrs. JAMES, Washington, D. C.: Oil painting entitled "Crossing the Ferry," by Adrien Moreau. Presented in memory of her father, Lucius Tuckerman (48532).
- LUDLOW, Miss C. S., Washington, D. C.: 18 insects from the Philippine Islands (48646).
- LYON, MARCUS W., jr., U. S. National Museum: 2 photographs of a Philippine water buffalo, *Bos bubalis* (48405).
- LYON, Dr. MARTHA M. B., Washington, D. C.: Anatomical specimen (48304).
- LYONS, H. G. (See under Egyptian Government.)
- MACDOUGAL, D. T., Tucson, Ariz.: 7 specimens of living cacti from New Mexico and Arizona (47740); 10 specimens of cacti (47769); 2 specimens of *Agave* from Arizona (48834).
- MCCOMB, GEORGE T., Lockport, N. Y.: Niagaran fossils from the western part of New York (48026; exchange).

- McCoy, Capt. FRANK R., U. S. Army.
(See under Col. E. B. Babbitt, U. S. Army.)
- MCDONALD, J. M., Globe, Ariz.: Specimen of western hercules beetle, *Dynastes granthi* (48121).
- McELHOSE, HENRY, St. Louis, Mo.: 150 specimens of Porto Rican Lepidoptera (48107: exchange).
- McGEE, MRS. ANITA NEWCOMB, Washington, D. C.: Vase from a Korean tomb (48502: loan).
- McGUIRE, J. D., Washington, D. C.: Sash of a Creek Indian (48102); war horn made from an African elephant's tusk (48202).
- McNAUGHTON, GEORGE A., San Marcos, Tex.: Skull of an alligator, *Alligator mississippiensis*, from near San Marcos (48735).
- MACKIE, DAVID B., Washington, D. C.: 10 birds' skins from various localities (47724); meadow lark, *Sturnella magna* (48514).
- MACKINTOSH, JAMES, Deer Isle, Me.: Specimen of rhodochrosite and a sample of rock from Deer Isle (47859; 48501).
- MACOUN, JOHN, Ottawa, Canada: Snake, *Natrix*, from Canada (47986); 154 specimens of mosses (48480: purchase).
- MALL, F. P., Anatomical Laboratory, Johns Hopkins University, Baltimore, Md.: Anatomical specimens (48410).
- MALLET, J. W., Charlottesville, Va.: Specimen of silica and one of furnace graphite (47574).
- MARLOFF, FRED., Oak Station, Pa.: 67 specimens of Microlepidoptera (48449).
- MARSH, G. E., Georgetown, Colo.: 3 living plants from Colorado (47774).
- MARSHALL, ERNEST B., Laurel, Md.: Skin and skull of a weasel, *Putorius*, and 4 skulls of mink, *Lutreola*. (48177); shrew (48195); 3 mice, *Microtus pinetorum*, *M. pennsylvanicus* and *Peromyscus leucopus* (48222); fishes, *Esox americanus*, MARSHALL, ERNEST B.—Continued.
E. reticulatus, *Aphredoderus sayanus* and *Erimyzon oblongus* (48819).
- MARSHALL, GEORGE, U. S. National Museum: Cicada-killer, *Sphecius speciosus* (47784); skin and skull of swamp rabbit, *Limnolagus*, from Tillery, Halifax County, N. C. (48223); mounted group of killdeer (48371: purchase).
- MARSHALL, Miss MAY, Page, W. Va.: Old gold-brocade skirt and shoulder piece, which belonged originally to Eleanor Bowles Gooch, of Virginia (48823: loan).
- MARVIN, Dr. M. F., contract surgeon, U. S. Army, Fort Mansfield, R. I.: Ichneumonid, *Lampronota americana* (47818).
- MASON, C. S., Jonesboro, Tenn.: Photograph of prehistoric stone objects (47936).
- MAXON, SAMUEL A., Oneida, N. Y.: 15 living plants, *Hepatica acuta* (48578).
- MAY, Miss ALMA, Washington, D. C.: Egg shell filled with plaster of Paris (48421).
- MAYNARD, HENRY W., Ketchikan, Alaska: Plant, *Boschniakia glabra* (47857).
- MAYO, N. S., Estacion Agronómica Central, Santiago de las Vegas, Cuba: 8 specimens of *Succinea fulgens* (47597); 9 species of Cuban land shells (47649).
- MEAD, O. P., West Salisbury, Vt.: Snapping beetle, *Alaus oculatus* (47583).
- MEARNS, Dr. E. A., U. S. Army, Manila, Philippine Islands: A large collection of zoological, ethnological, and geological specimens from the Philippine Islands (47782); 2 rain coats from Batan Island, opposite South Formosa (47867); 17 bird skins from the Philippine Islands (48077); collection of ethnological and natural history specimens from the Philippine Islands (48134). (See under Dr. Pascoe and Maj. John R. White.)

- MERCHANT, Miss M., Robert Lee, Tex.: Hen's egg, nearly spherical in shape (48541).
- MERRICK, FRANK A., New Brighton, Pa.: 69 specimens of Lepidoptera (48062).
- MERRILL, ELMER D., Manila, P. I.: Piece of Mandaya cloth from Mindanao (47664).
- MERRILL, GEORGE P., U. S. National Museum: Glazed tile and fragments of pottery from Armenia (48409).
- MERRILL, Miss H. B.: About 500 insects, a reptile, shells, and nuts (48271).
- MESTAYER, R. L., Lambton Quay, Wellington, New Zealand: Diatomaceous and foraminiferous earths from the Oamaru district, New Zealand (48372).
- MEXICO, CITY OF, MEXICO: INSTITUTO MEDICO NACIONAL: Leaf-base of *Mangifera* sp., attacked by a fungus (47567); seeds from Mexico (48075; exchange).
- MEYRICK, EDWARD, Thornhanger, Marlborough, England: 30 specimens of Lepidoptera, cotypes of East Indian species (48420); 20 specimens of Microlepidoptera (48600); 21 specimens of Australian Microlepidoptera (48769).
- MICHAELIS, Lieut. OTHO E., U. S. Army, Cienfuegos, Cuba: 12 sponges from Bahía de Cochinos (47707).
- MILES, CHARLES, Greenriver, Utah: 3 larvæ of a fly, *Eristalis* (47544).
- MILLER, Dr. G. BROWN, Washington, D. C.: Anatomical specimen (48557).
- MILLER, Rev. JOHN, Wayne, Pa.: Poisoned arrows from Africa (48396).
- MILLER, Miss MARY F., Washington, D. C.: 75 plants from the northeastern part of the United States (48553); 15 plants, *Botrychium*, from New York and Vermont (48601); 2 specimens of plants, *Tiarella cordifolia*, from Maryland (48745).
- MILLER, ZACK, The 101 Ranch, Jamestown Exposition, Va.: Collection of implements from an Indian mound on the James River (47699); hide and skeleton of an American buffalo, *Bison bison* (47757).
- MILLS, W. C., Jamestown Exposition, Va.: 2 fossils (47968).
- MILLS, W. J., Atlanta, Ga.: Moth, *Chlacenogramma jasmiacurum* (48446).
- MINNESOTA, UNIVERSITY OF, Minneapolis, Minn.: 10 plants, *Lucinaria*, from Minnesota (47860; exchange).
- MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: Specimen of living plant, *Neotrelcasia* (47749); 636 plants collected by Lindheimer in the southwestern part of the United States (48003); 4 living plants, *Thompsonella*, from Mexico (48247; Exchange).
- MITCHELL, Miss EVELYN GROESBEECK, Washington, D. C.: Types of 4 new species of Chironomidae (47980); family Bible printed in Dutch, 1741 (12481; loan).
- MITCHELL, Hon. JOHN D., Victoria, Tex.: Snake and frog from Texas (48254); 2 plants, *Quercus*, from Texas (48545).
- MITCHELL, Hon. MASON, American consul, Chung-king, West China: Skin and skull of a male specimen of Takin, *Budorcas taxicolor* (48806).
- MOCK, M. G., Muncie, Ind.: Flint arrowpoint (47778).
- MONTANDON, A. L., Bucarest, Roumania: Snakes from Europe (48390).
- MOORE, CLARENCE B., Philadelphia, Pa.: Skulls from burial mounds on the Arkansas River, Ark. (48603).
- MOORE, J. E., Fairbury, Ill.: Archeological stone implements (48306; exchange).
- MORGAN, Dr. E. L., Washington, D. C.: 2 bulbs, *Cannas*, from Washington State: one edible, and a popular article of food among the Indians; the other, poisonous (48874).

MORGAN, Mrs. G. W., Zanesville, Ohio: Commissions of Gen. G. W. Morgan, and a flint-lock pistol carried by him in the battle of Churubusco, Mexico (47948).

MORHART, CURT, Ensfeld Post Dollnstein, Middle Franconia, Germany: Fossils from the Jura region (48525: exchange).

MORTON, DR. WILLIAM JAMES, New York City: Portrait in oil of Dr. William T. G. Morton, a pioneer in the use of ether as an anaesthetic (48266).

MOWBRAY, L. L., Bermuda Museum, Hamilton, Bermuda: Bones of the "Cahow" bird from a limestone cave at Bailey's Bay, Bermuda (47554).

MUHSE, Mrs. EFFA F., Bloomington, Ind.: Toad (48603).

MUNDT, WALTER, Mahlsdorf bei Berlin, Germany: Seeds of *Echinocactus saulbergii* (48556).

MUNGER, H. W., Chester, Pa.: Piece of Jusi cloth from Iloilo, Panay Island, Philippines (47947).

MUNN & Co., New York City: Bronze copy of the medal awarded by the Scientific American for the best device for the protection of life and limb (48030).

MURDOCH, JOHN, jr., Deadwood, S. Dak.: Specimen of Dakota red squirrel, *Sciurus hudsonicus dakotensis* (48496).

MURRAY, Sir JOHN, Edinburgh, Scotland: Fossil corals from Christmas Island, Indian Ocean (48351).

MURTFELDT, Miss MARY, Kirkwood, Mo.: 22 specimens of Microlepidoptera (48679).

MUSÉE D'HISTOIRE NATURELLE. (See under Elbeuf, France.)

MUSEO NACIONAL. (See under San José, Costa Rica.)

MUSEUM OF NATURAL HISTORY. (See under Paris, France.)

NATIONAL SOCIETY, CHILDREN OF THE AMERICAN REVOLUTION (through Mrs. A. A. Kendall): Patchwork quilt (48825: loan).

NATIONAL SOCIETY OF THE COLONIAL DAMES OF AMERICA, Washington, D. C.: Colonial relics lent to the Society by Mrs. John Cropper and Mrs. R. R. Hoes (48342); silver, open-face watch, lent by Mr. Louis Randolph Mayo; pendant earrings and tray (silver plated on copper), lent by Mrs. George W. Mayo; silver spoons, lent by Arthur Randolph Mayo; and coat, vest, knee breeches, and sash, lent by Mr. George Dagworthy Mayo (48631); oval shoe buckles with brilliants, lent to the society by Gen. William Ruffin Cox; oblong shoe buckles with brilliants, fans, and a punch ladle, lent to the society by Mrs. William Ruffin Cox (48632); miniature portrait of Catherine Thomson of New York, wife of Col. Isaac Coles, of Virginia, an officer in the Revolutionary Army and a Member of Congress; fan presented to Miss Elizabeth Catesby on the occasion of her wedding, lent by the Virginia Society; prayer book printed in Edinburgh in 1770; steel engraving of a part of the interior of St. Paul's Cathedral, lent by Mrs. James L. Harper; silver pitcher and platter of the time of King George III, lent by the District of Columbia Society (48860; 48861; 48862); colonial relics received from Mrs. William B. Beekman, New York City (48673); silver bowl won by the race horse Trial on the Newmarket race course, South Carolina, in 1768 (48185); stoneware jug with silver handle and top, brought to America on the Mayflower; 2 silver candlesticks, probably of the time of Charles II; 2 glass decanters with tops; 6 colonial East India soup plates; 6 colonial East India dinner plates (48295). Loan.

NATIONAL SOCIETY OF THE DAUGHTERS OF THE AMERICAN REVOLUTION, Mrs. Donald McLean, president-general: Jewel trunk, a relic of Revolutionary days (48789: loan).

NAVAS, Rev. LONGINOS, Colegio del Salvador, Zaragoza, Spain: 2 specimens of Neuroptera (48244).

- NEBRASKA, UNIVERSITY OF, Lincoln, Nebr.: Specimen of plant, *Ribes*, collected in Nebraska by P. A. Rydberg, being a portion of the type of *Ribes aurum chrysococcum* (48671).
- NELLIS, L. P., Turkey, Ariz.: 3 specimens of the lizard, *Sauromalus ater*, from Arizona (48876).
- NELSON, Hon. KNUTE, United States Senate: Specimen of rock salt obtained about 30 miles from Salt Lake (48710).
- NETTLES, T. D., jr., Buffalo, Tex.: Specimen of *Phengodes* (48584).
- NEWCASTLE ON TYNE, ENGLAND, HANCOCK MUSEUM: Collection of fossil vertebrates, invertebrates, and plants from the coal measures and the Permian of England (48563; exchange).
- NEW YORK BOTANICAL GARDEN, New York City: 3 specimens of living cacti from the West Indies (47533); *Cereus lepidotus* material from Hope Gardens, Jamaica, and 2 sheets of Crassulaceae (47589); 358 plants from the Bahamas (47601); 2 specimens of living plants from Palermo, Italy (47622); 12 ferns mainly from tropical America; also 6 photographs of ferns of tropical American species, *Antrophyum* (47700); 2 specimens of cactus *Cephalocereus*, from Guadeloupe (47719); 149 plants from the Bahamas (47734); 20 living plants, Cactaceae, from various localities (47738); 87 plants collected in Jamaica (47882); 415 plants from Utah (47891); specimen and 8 photographs of Mexican plants collected by Liebermann (47911); specimen of *Centrophymum dussianum* from Guadeloupe (48035); 1,064 plants from the Philippine Islands and 61 plants from the Barbados (48403); 34 ferns from British Guiana (48707); specimen of cotton, *Gossypium*, from Jamaica (48714; exchange).
- NEW YORK CITY, COLLEGE OF PHYSICIANS AND SURGEONS, COLUMBIA UNIVERSITY: Collection of osteological material (48228; exchange).
- NEW YORK STATE COLLEGE OF AGRICULTURE, Ithaca, N. Y.: 4 specimens of Hymenoptera (*Erocysoma ritis*, from New York State (48831)).
- NICHOLLS, J. HOWARD, Galway, N. Y.: Rock and crystals (48012; exchange).
- NIGHTINGALE, Rev. ROBERT C., Beechamwell Rectory, Swaffham, England: Collection of fire-making apparatus (47646).
- NOYES, Miss MARY, Washington, D. C.: Collection of old embroideries and laces made by and formerly belonging to members of the Pilgrimage family of Southbridge and Sturbridge, Mass. (48070).
- OELL, MILTON L., Washington, D. C.: 2 turtles from Florida (48323).
- OFFUTT, WINSOR, Bethesda, Md.: Runt egg of house wren, *Troglodytes aedon* (48582).
- OHIO STATE UNIVERSITY, Columbus, Ohio: 16 ferns from Guatemala (48025); 280 plants collected in Guatemala by Prof. W. A. Kellerman (48508; exchange).
- OLDTOWN CANOE COMPANY, Oldtown, Me.: Miniature canvas-covered canoe (47826).
- ORCUTT, CHARLES R., San Diego, Cal.: Fragments of pottery from Mexico (48293).
- OSBURN, RAYMOND E., Barnard College, Columbia University, New York City: 3 specimens of isopod, *Pentidotea whitci*, from Vancouver (48507).
- OSTENDORF, B., Vincennes, Ind.: 2 two-valve specimens of *Uta heros* from Indiana (48232).
- OSWELL, Mrs. C. A., Washington, D. C.: Collection of old French, Dresden, Sevres, Crown Derby, Chelsea, Napoleon, and other chinaware (48844; loan).
- OTTAWA, CANADA, CENTRAL EXPERIMENTAL FARM, DEPARTMENT OF AGRICULTURE: 2 specimens of *Recurvaria gibsonella* (48143).

- OTTAWA, CANADA, GEOLOGICAL SURVEY OF: 70 plastotypes of Onondago and Hamilton fossil invertebrates (48090).
- OVER, W. H., Clear Lake, S. Dak.: 6 species of Naiads from Wabash River, Illinois (48506).
- PAINTER, A. W., Lansdowne, Pa.: 3 plants, *Picaria flearia*, from Pennsylvania (48605).
- PALLISTER, HUGH D., Terlingua, Tex.: 2 fossil shells from the Upper Cretaceous related to *Ostrea subspatulata* (47886); 11 specimens of Upper Cretaceous fossils (48150).
- PALMER, EDWARD, Washington, D. C.: 195 specimens of living Cactaceae from Mexico (47559: purchase); several hundred specimens of land and freshwater shells from the State of Tamaulipas, Mexico (47596); 574 plants from Tamaulipas (47771: purchase).
- PALMER, WILLIAM, U. S. National Museum: Skull of sloth bear, *Melursus* (48357); 1,915 insects collected by Messrs. Mackie, Wood, Lyon, and Palmer (48511).
- PARIS, FRANCE, MUSEUM OF NATURAL HISTORY: 12 specimens representing 6 species of Isopods from the eastern part of Africa, collected by M. de Rothschild (48442); 29 specimens representing 7 species of isopods from the Charcot Expedition to the Antarctic (48494). Exchange.
- PARISH, S. B., San Bernardino, Cal.: 2 living cacti, *Opuntia*, from California (48135); plant, *Ribes parishii* (48383).
- PARKER, B. F., Bridgeton, N. J.: Specimen of walking-stick, *Diapheromera veliei* (47893).
- PARSONS, A. A., Guadalajara, Mexico: 2 grasshoppers, *Tachipoda* (47742).
- PARTIELLO, Maj. J. M. T., U. S. Army, Malabang, Mindanao, Philippine Islands: 3 scorpions (48455; 48622); specimen of beetle from the Philippine Islands (48498).
- PASCOE, Doctor, Manila, Philippine Islands (received through Dr. Edgar A. Mearns, U. S. Army): Skin of a snake, *Python reticulatus*, from Luzon, Philippine Islands (48636).
- PATCH, Miss EDITH M., Orono, Me.: Moth, *Heterocampa gutticincta* (48140); 4 pupae and a larva of *Crociographa normani* (48750); 2 moths, cocoons and work of a tortricid (48813).
- PATCHELL, JAMES, Knik, Cook Inlet, Alaska: Oligochaetous worm (48366).
- PATTEN, Miss JULIET, Washington, D. C.: 3 living plants, *Sedum*, from England (47587).
- PAULL, Mrs. S. O., Wellsburg, W. Va.: Mole cricket, *Gryllotalpa borealis* (47894).
- PAYN, ELIAS J., Olympia, Wash.: Young oysters (48858).
- PAYNE, Miss BETTIE L., Brunswick, Md.: About 40 Devonian fossils from Maryland (48592).
- PENLAN SLATE COMPANY, Penlan, Va.: Slate from a quarry near Penlan (48637).
- PERKINS, G. H., Burlington, Vt.: Negatives and photographs of type of fossil whale, *Delphinapterus vermontanus*, from Charlotte Town-ship, Vt. (47564: purchase).
- PILSBRY, H. A., Philadelphia, Pa.: 2 specimens of a barnacle, *Octolasmis forresti*, on the gills of *Patinarus argus*, from Summerland Key, Fla. (48216).
- PINCHOT, Mrs. J. W., Washington, D. C.: Large collection of fans, laces, embroideries, paintings, etc. (48717: loan); beaded awl-case made by the northern Sioux Indians (48784).
- PIPER, C. V., Department of Agriculture, Washington, D. C.: 68 plants collected in Oregon by Kirk Whited and W. C. Cusick (47912; 48402); 2 ferns collected in the State of Washington by J. B. Flett (48466).

- PITTIER, H., Department of Agriculture, Washington, D. C.: 67 mosses and 338 plants from Central America (47639; 47713); 126 plants from Colombia, South America (47732); 20 plants collected in Salvador by Carlos Renson (47823); 2 crabs, *Pseudothelphusa cobancensis* (48097).
- POLK, GEORGE W., San Antonio, Tex.: Silk badge of the Young Men's National Whig Convention, held in Baltimore, May 4, 1840 (48001).
- POLLOCK, MISS A. L., Seattle, Wash.: Nest of Puget Sound brush tit, *Psaltriparus minimus stauratus* (47874).
- POWERS, FRANK, Harshaw, Ariz.: Silver ore from World's Fair mines at Harshaw (48322).
- POYSER, W. A., Philadelphia, Pa.: 3 ferns collected in Pennsylvania (48538: exchange).
- PRESTON, A. E., Los Angeles, Cal.: Fossil sea biscuit, *Astroclapsis* sp. (48315).
- PRESTON, H. B., London, England: 21 type specimens, representing 20 species, of land and fresh-water shells from Mexico, Central and South America (48704: purchase).
- PRINGLE, C. G., Burlington, Vt.: 264 plants collected in Mexico (47569: purchase); living plants from Nuevo Leon, Mexico (47625: exchange); 2 living plants from Guerrero, Mexico (47681: exchange); 10 living plants collected in Mexico (47809); 31 Mexican plants (48237).
- PUBLIC MUSEUM, MILWAUKEE, WIS.: Cast of a large stone ax from Illinois (48675: exchange).
- PURPUS, C. A., Zacnapam, Puebla, Mexico: Living plants, *Olivieranthus* and *Echeveria*, and seeds from Mexico (47578; 47785; 47754); 70 living plants from Mexico (47939; 47971: purchase); specimen of *Sedum* from Orizaba, Mexico (48021); living specimen of *Sedastrum* from Vera Cruz (48182); seeds of *Dahlia* from Mexico (48278); 9 living cacti, *Cercus*, from Vera Cruz (48423).
- QUAINTANCE, A. L., Department of Agriculture, Washington, D. C.: Type material of *Aleurodes howardi* n. sp. from Cuba (47704).
- QUARTERMAN, OSCAR F., Canaveral, Fla.: Egg capsule of nurse shark, *Ginglymostoma cirratum* (47814).
- QUEEN'S UNIVERSITY. (See under Kingston, Ontario, Canada.)
- RALPH, MRS. W. L., Washington, D. C.: 1,061 birds' eggs and 117 nests, forming part of the collection of the late Dr. W. L. Ralph (48683).
- RANSIER, H. E., Manlius, N. Y.: Plants, *Botrychium ovondagense*, from the central part of New York (48010).
- RATHBUN, RICHARD, U. S. National Museum: Pair of Tower pistols with bell mouths and brass barrels (12368: loan).
- REED, EDWIN C., Concepcion, Chile: 2 photographs of a basking-shark, *Cetorhinus maximus* (47890).
- REED, MRS. ELIZABETH A., Chicago, Ill.: Shells and other invertebrate animals from the keys off Sarasota, Florida (48089).
- REED, FRED. M., Riverside, Cal.: 2 specimens of living cactus, *Opuntia*, from California (48755).
- REID, MRS. WHITELAW, London, England (received through Mrs. James Pinchot): Collar and pair of cuffs of Venetian point, latter part of XVIII century (48806).
- REUTER, O. M., Åbo, Finland: 20 specimens of Hemiptera (48338: exchange).
- REYNOLDS, ALLEN JESSE, Council Grove, Kans.: Fragmentary impressions of fossil leaves and associated rock (47915).
- RHOADS, I. MILTON, Edge Hill, Pa.: Ilmenite from Edge Hill (47565); Ilmonite geodes (48213). Exchange.
- RICHARDSON, MRS. CHARLES W., Washington, D. C.: Collection of English and German porcelains and silver (48847: loan).

- RICHARDSON, MRS. THOMAS F., Washington, D. C.: Collection of art objects, consisting of laces, embroideries, ivories, and other articles (48805: loan).
- RICKER, P. L., Washington, D. C.: 6,950 mounted and 2,000 unmounted specimens of fungi (48196: deposit); 1,000 specimens of fungi (48197).
- RICKSECKER, L. E., San Diego, Cal.: About 100 moths (48628).
- RIDGWAY, ROBERT, U. S. National Museum: 5 birds' skins and a partial skeleton of a bird (48147).
- RILEY, J. H., U. S. National Museum: 25 birds' skins from Europe, Morocco, and the Canary Islands (48239).
- RIO DE JANEIRO, BRAZIL, INSTITUTO DE MANGUINHOS: 26 species of mosquitoes from Brazil (48659: exchange).
- RIVERA, MANUEL J., Department of Agriculture, Washington, D. C.: About 125 beetles from Southern Chile (47706).
- ROBBINS, CHARLES P., Spokane, Wash.: Samples of tin ore from Spokane tin mines (47797).
- ROBERTSON, MRS. T. C., Columbia, S. C.: Collection of pottery made by the Catawba Indians, and 25 unmounted photographs illustrating their native customs, etc. (48736: purchase).
- ROBESON, MRS. G. M., Washington, D. C.: Fan and piece of Greek lace (48803: loan).
- ROBINSON, MAJ. WIRT, U. S. Army, West Point, N. Y.: Mammals, birds, and insects from various localities (48359): about 50 insects (48618).
- ROHWER, S. A., Florissant, Colo.: Moths and mosquitoes (47631: exchange): about 175 insects (48108).
- ROHWER, S. A., and T. D. A. COCKRELL, Boulder, Colo.: 46 specimens of mosquitoes, representing the species *Culiseta impatiens* (= *absobrinus*) and *Aedes stimulans* (= *vittatus-chestii*) (47555).
- ROLLE, H., Berlin, Germany: 166 lots, comprising several hundred land shells from the Philippine Islands, China, Mexico, Africa, etc. (from the Mollendorff collection and other sources) (47729: purchase).
- ROOSEVELT, HON. THEODORE, President of the United States: A beautifully embroidered Arabian saddle-cloth (47815); model, in brass, of an Egyptian obelisk (48118).
- ROOSEVELT, MRS. THEODORE, The White House: Painted fan with carved ivory sticks, and a handkerchief of Philippine drawwork and embroidery (48732: loan).
- ROOSEVELT, QUENTIN, The White House: Bird, *Certhia familiaris americana* (47904).
- ROSENSTOCK, E., Gotha, Germany: 99 ferns from southern Brazil (48113: purchase).
- ROSSIGNOL, G. R., JR., Savannah, Ga.: Nests and eggs of seaside sparrow, *Ammodramus maritimus*, and Worthington's marsh wren, *Telmatoodytes griseus*, with 2 parent birds of the latter (47538).
- ROWLEY, J., Palo Alto, Cal.: Shrew, *Sorex vagrans* (48684).
- ROYAL BOTANIC GARDEN. (See under Calcutta, India.)
- ROYAL BOTANIC GARDENS. (See under Kew, London, England.)
- ROYAL BOTANICAL MUSEUM. (See under Berlin, Germany.)
- ROYAL MUSEUM OF NATURAL HISTORY. (See under Vienna, Austria.)
- ROYSTER, ALPHONSO, Suffolk, Va.: 2 purple finches, *Carpodacus purpureus* (48448).
- RUGG, HAROLD G., Hanover, N. H.: 11 ferns from New England (48456: exchange).
- RUSSELL, COL. A. H., U. S. Army (retired), Washington, D. C.: Collection of small arms and appliances (48192).

- RYDER, DR. EMILY B., Chicago, Ill.: Parsi schoolgirl's suit, or "God jacket" (48786: purchase).
- SAFFORD, W. E., Department of Agriculture, Washington, D. C.: Robe made from skins of an American ostrich, *Rhea americana*, collected in Patagonia (47869); cutlasses, lanceheads, etc., from the island of Guam (48513).
- ST. JOHN, EDWARD P., Hartford, Conn.: Fragments of human bones from the eastern bank of the Connecticut River at South Windsor (48495).
- ST. NICHOLAS SOCIETY, New York City: Bronze portrait medallion of Washington Irving (48249).
- SANDERS, B. L., Selmer, Tenn.: Pupa of a beetle, *Dynastes tityus* (47843).
- SAN JOSÉ, COSTA RICA, MUSEO NACIONAL: Fishes from Costa Rica (48787).
- SANTIAGO DE LAS VEGAS, CUBA, ESTACION CENTRAL AGRONÓMICA: 3 specimens of *Mimosa* from Cuba (47661: exchange); 200 Cuban plants (47768); 7 specimens of tropical American plants (47737: exchange); 62 Cuban ferns (47810).
- SÃO PAULO, BRAZIL, INSTITUTO SÉRUM-THERAPICO DO ESTADO DE SÃO PAULO: 13 snakes from South America (48633: exchange).
- SAUTER, H., Takao, South Formosa: Fishes, reptiles, and invertebrates from Formosa (48795: purchase).
- SCHAEFFER, CHARLES, Glen Echo, Md.: Skin of an otter, *Lutra canadensis* (48921); skin of *Lutra canadensis* (47991: purchase).
- SCHAUS, WILLIAM, Costa Rica, Central America: A very interesting lot of mounted and unmounted Lepidoptera, comprising about 5,000 specimens from Costa Rica and Panama, collected by the donor (48286); about 2,500 specimens of Lepidoptera (48552); about 700 specimens of Lepidoptera (48690). (See also under C. H. Lankester.)
- SCHLEY, MRS. F. W., Washington, D. C.: English silver teapot (48843: loan).
- SCHMID, EDWARD S., Washington, D. C.: Solitaire, *Myadestes unicolor* (48607).
- SCHRODER, CORPL. ROBERT A., Fort Mason, Cal.: Birds and mammals from Basilan (48080).
- SCHUMORE, MISS ELIZA R., Washington, D. C.: Chinese and Japanese porcelain (48727: loan); model of Borgund church, Norway (48809).
- SCOTT, JOHN W., HEIRS OF: An old-style melopean presented through Mrs. G. W. Woodborne, Uhrichsville, Ohio (47966).
- SEARS, JOHN H., Peabody Museum, Salem, Mass.: Fossil bryozoan, *Shizoporella unicornis*, from Bass River, Beverly, Mass. (48045); bryozoans from Bass River, Beverly, and Danvers River (48339).
- SEELINGER, STEVE, Norfolk, Va.: Specimens of ocean sunfish, *Mola mola*, taken from near Virginia Beach, and a parasitic copepod, *Pennella* sp. (48666).
- SETON-KARR, H. W., Wimbledon, London, England: Drawings and photographs of flint implements collected in the Fayum, Egypt (47645); collection of prehistoric stone objects from Egypt and India (47957).
- SEWARD, MISS OLIVE RISLEY, Washington, D. C.: 13 pieces of Nymphenberg ware (48845: loan).
- SHANTZ, H. L., Columbia, Mo.: 4 specimens of living cacti, *Opuntia*, from Missouri (48152: exchange).
- SHEARER, C. B., Llano, Tex.: Specimens of wollastonite (48086).
- SHEETS, G. A., Weston, Mich.: Great horned owl, *Bubo virginianus*, from Michigan (47901).
- SHERMAN, F., Raleigh, N. C.: Salamander from Fairfax County, Va. (48737).
- SHERMAN, JOHN D., JR., Brooklyn N. Y.: Beetle, *Scutopterus angustus* (47813).

- SHREVE, FOREST, Baltimore, Md.: 105 plants from Maryland (47831; 47955).
- SHULL, DR. GEORGE H., Santa Rosa, Cal.: Specimen of living cactus, *Opuntia*, from Texas; also specimen of *Opuntia* from California (48453).
- SICARD, JACQUES, Golfe-Juan, A. M., France: Plaque illustrating the donor's "metallic luster ware" (47662).
- SIM, T. R., Pietermaritzburg, Natal, South Africa: 3 fragmentary specimens of ferns, *Asplenium*, from South Africa (48268).
- SIMPSON, W. W., Tsochow, Old City, Kansu, China: Specimen of *Cordyceps chinensis*, parasitic upon the larva of a beetle (48778).
- SINCLAIR, DR. W. J., Princeton, N. J.: Teeth of *Phytosaurus* from Fossil Forest, near Adamana, Arizona (48564).
- SITZ, MISS CLARA B., Washington, D. C.: 2 photographs of the Key Mansion, Washington, D. C. (47663).
- SLATER, W. M., Washington, D. C.: 2 specimens of rutile ore from Rose-land, Va. (48435).
- SMALLS, EMILE B., Cedarville, Cal.: Promissory note issued by the first Republic of France (48350).
- SMILLIE, THOMAS W., Washington, D. C.: Scolytid beetle, *Monarthron fasciatum*, with parasitic moth (48524).
- SMITH, ADAH L., National City, Cal.: Shells, *Eulethidium substriatum* and *Phasianella perforata* (47863).
- SMITH, BENJAMIN H., Philadelphia, Pa.: Plant, *Pimpinella saxifraga*, from Pennsylvania (48074).
- SMITH, H. H., Department of Agriculture, Washington, D. C.: Collection of about 3,500 insects; also about 25 spiders from Alabama (48768).
- SMITH, JOHN B., New Brunswick, N. J.: 3 moths (cotypes) (47633: exchange); 5 larvae of *Culex perturbans* (47900); larva, pupa, and SMITH, JOHN B.—Continued.
pupal skin of *Culex perturbans* (48830).
- SMITH, JOHN DONNELL, Baltimore, Md.: 2 Guatemalan palms, *Kinnetostigma* (48124); 145 specimens of ferns, *Dryopteris*, *Polypodium*, etc., mainly from Central America (48457); 2 specimens of Lechthidaceae (48483). Loan.
- SMITH, R. L., West Raleigh, N. C.: 6 specimens of Hymenoptera, *Sigalphus curculionis* (48820).
- SMITH, STEPHEN DECATUR, bequest of (received through S. Decatur Smith, Jr.): Gold ring given by Capt. Richard Somers to Commodore Stephen Decatur, and after the death of the latter presented by his widow to Francis Gurney Smith. From him it descended to Stephen Decatur Smith, by whom it was bequeathed to the National Museum (48630).
- SMITH, DR. THOMAS C., Washington, D. C.: 2 anatomical specimens (48712; 48187).
- SMITH, W. D., Washington, D. C.: Nose whistle (48234).
- SMITHSONIAN INSTITUTION:
Collection of historical objects bequeathed to the Institution by Mr. Henry R. Magruder (received through Mr. Arthur C. Gibson) (47577); bronze medal presented to the Institution by Mrs. Maria H. Stinchfield, of Detroit, Mich. (47671); a pair of bronze flower-vases presented to Mr. Charles Lanman in 1883 by the Emperor of Japan, and now presented to the Smithsonian Institution by Mrs. Adeline Lanman (47905); vertebrate and invertebrate fossils collected in Alaska by C. W. Gilmore (48004); 35 plants, Cyperaceae, Orchidaceae, and Poaceae, collected in Guatemala by Mr. von Turckheim and presented by Capt. John Donnell Smith, Baltimore, Md. (48042); 85 plants, mainly Orchidaceae, Cyperaceae, and Poaceae, presented by Capt. John Don-

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nell Smith (48068); 22 plants from the Sello collection of the Botanical Museum, Berlin, Germany, presented by Capt. John Donnell Smith (48153); the Gustav Hambach collection representing the main divisions of the North American Paleozoic, including numerous echinoderms and a fine representation of Mississippi Valley Subcarboniferous fossils, also the types of a large number of Pentremites, fossil leaves, fishes, and some of the figured specimens of the old Shumard collection (48175); 3 skeletons of Eskimos, collected by C. W. Gilmore in Alaska (48191); collection of Indiana Niagaran fossils, purchased from J. R. Gilbert, Ubee, Ind. (48201); pottery jar found by an Indian on the San Carlos Reservation, Ariz., and obtained through the courtesy of the Commissioner of Indian Affairs (48211); the 55-horsepower, 5-cylinder gasoline engine, used on Dr. Samuel P. Langley's aerodrome, 1903 (48265); a silver figurine from Bolivia, in the style of the Tifitaca region, doubtless of native origin and belonging to the pre-Columbian period, presented by Dr. Thomas S. K. Morton, Philadelphia, Pa. (48276); life-preserver worn by Maj. J. W. Powell during his famous exploration on the Green and Colorado rivers in 1869, and presented by Mr. William R. Hawkins, Eden, Ariz., through Mr. Robert B. Stanton, New York City (48296); ethnological material from the Philippine Islands, etc., presented by Maj. George P. Ahern, U. S. Army (retired) (48368); a collection of corals, shells, and other invertebrates from Flint Island, obtained by Mr. C. G. Abbot, of the Astrophysical Observatory, in connection with the solar eclipse expedition (48373); 27 plants, mainly Guatemalan orchids, presented by Capt. John Donnell Smith (48470); 48 specimens of Guatemalan orchids, presented by Capt. John Donnell

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Smith (48537); 139 plants collected chiefly by Lehmann in Colombia and Central America, presented by Capt. John Donnell Smith (48563); about 5,000 specimens of Cambrian fossils from British Columbia, and about 2,500 from Montpelier, Idaho, collected by Dr. Charles D. Walcott and party during the summer of 1907 (48712); 12 pieces of pottery purchased through the Office of Indian Affairs by Horton M. Miller, superintendent Moqui Agency, Keams Cañon, Ariz. (48724).

Bureau of American Ethnology: Collection of ethnological specimens and plants made by Mrs. M. C. Stevenson in the pueblos of Zuñi and Taos, N. Mex. (47686); aboriginal soapstone objects from a quarry on Connecticut avenue extended (Rose Hill), collected by W. H. Gill (47687); large steatite pipe illustrating the use of the ordinary pump-drill, made by G. Wiley Gill; arrow-points collected in a village site in Sussex County, Del., by G. Wiley Gill (47688); small bronze (hawk) bell from a mound in Alabama, obtained by Peter A. Brannon, of Montgomery, Ala. (47689); iron or steel hammer picked up on the beach at Coan River, lower Potomac, by De Lancy Gill (47690); Hopi notched "fiddle" and 2 perforated bits of metal, presented by Mrs. H. T. Hall, Chicago, Ill. (47691); stone ax and flaked implements from Popes Creek, Md., collected by W. H. Holmes (47692); cast of a stone ax belonging to D. I. Bushnell, of St. Louis, Mo. (47963); steatite pot from Mecklenburg County, Va. (47964); basket-box made by the Chittinacha Indians of Louisiana, collected by J. R. Swanton (47965); 2 grooved axes and a hammer-stone (47996); collection of objects representing the industrial and social life of the Tahltan Indians, Stikine River, British Columbia, collected by George T. Emmons (47997); 2 human skulls, one from

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a burial mound in La Push, Wash., the other from a cave in Pulaski County, Mo. (48189); 15 plants collected by Mrs. Matilda C. Stevenson in New Mexico (48230); collection of bones and fragmentary pottery made by Gerard Fowke from mounds in Central Missouri, under the auspices of the St. Louis Society of the Archeological Institute of America (48441); surface pebbles from the mouth of the Colorado River, Mexico, collected by D. L. Gill in 1900 (48519); collection of archeological objects resulting from explorations made in Florida in 1893 by the late F. H. Cushing, under the joint auspices of the Bureau of American Ethnology and the Archeological Association of the University of Pennsylvania (48531); collection of Indian relics recently received from C. W. Weigel, of Kennewick, Wash. (48682).

National Zoological Park: Laughing gull, *Larus atricilla*; white-faced ibis, *Plegadis guarana* (47547); canvasback duck, *Aythya valisineria*, Franklin's gull, *Larus franklini* (47548); 3 specimens of spoonbill, *Ajaia ajaja*, willet, *Symphemia inornata* (47549); Cuban deer, *Odocoileus*, 2 specimens of mule deer, *Odocoileus macrotis* (47550); mule deer, *Cariacus macrotis*, kinkajou, *Cercoleptes caudivolvulus*, mink, *Putorius vison*, black ape, *Cynopithecus niger*, common macaque, *Macacus cynomolgus*, burriel sheep, *Ovis naheer*, prong-horn, *Antilocapra americana*, 2 specimens of coypu, *Myocastor coypus*, 3 specimens of Florida wild-cat, *Lynx rufus floridanus*, 2 specimens of Florida otter, *Lutra canadensis vasa*, flying phalanger, *Petaurus lion*, *Felis leo* (47794); 3 specimens of barn owl, *Strix pratineola*, sandhill crane, *Grus canadensis*, 2 specimens of roseate spoonbill, *Ajaia ajaja*, spotted bower bird, *Chlamydera maculata*, crested pigeon, *Ocyphaps lophotes*, barn owl, *Strix*

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pratineola, wood ibis, *Tantalus loculator*, black-crowned night heron, *Nycticorax nycticorax naevius*, Louisiana heron, *Ardea tricolor ruficollis*, roseate spoonbill, *Ajaia ajaja* (47795); water moccasin, *Ancistrodon piscivorus*, 7 specimens of iguana, *Cyclura*, 2 specimens of iguana (47796); coypu, *Myocastor coypus*, kinkajou, *Cercoleptes caudivolvulus*, bull snake, *Pituophis sayi*, 2 specimens of iguana (47941); bronze-winged pigeon, *Phaps chalcoptera*, quail, *Perdix cinerea*, 2 specimens of crested pigeon, *Ocyphaps lophotes*, crowned pigeon, *Goura victoria* (47942); 3 specimens of iguana, *Cyclura* sp., etc. (47943); prong-horn antelope, *Antilocapra americana*, deer, *Cariacus*, black bear, *Ursus americanus*, cougar, *Felis concolor*, California sea-lion *Zalophus californianus* (47944); harbor seal, *Phoca vitulina*, 3 specimens of crested pigeon, *Ocyphaps lophotes*, mute swan, *Cygnus gibbus*, spider monkey, *Ateles* sp.; capuchin, *Cebus hypoleucus*, golden agouti, *Dasyprocta aguti*, black bear, *Ursus americanus* (47945); crested pigeon, *Ocyphaps lophotes* (47956); iguana, *Cyclura cyclura* (48002); pine snake, *Pituophis melanoleucus* (48018); American beaver, *Castor canadensis* (48033); hedgehog, *Erinaceus europaeus* (48038); Guinea baboon, *Papio sphinx* (48071); black leopard, *Felis pardus*, swift fox, *Vulpes velox* (48081); diamond rattlesnake, *Crotalus adamanteus* (48082); iguana, *Iguana* sp., California valley quail, *Callipepla californica* (48112); American badger, *Taxidea americana* (48145); iguana, *Iguana* sp., (48206); ocellated turkey, *Meleagris ocellata* (48207); kiwi, *Apteryx mantelli*, red kangaroo *Macropus rufus* (48208); lemur, *Lemur mongoz* (48212); gopher snake, *Spilotes corais couperii* (48255); American badger, *Taxidea americana* (48256); blue jay, *Cyanocitta cristata*

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(48257); a pair of dropped antlers of caribou, *Rangifer caribou* (48267); agouti, *Dasyprocta prymnolopha* (48282); great anteater, *Myrmecophaga jubata* (48283); snowy owl, *Nyctea nyctea* (48328); canvasback duck, *Aythya valisineria*, king vulture, *Gypagus papa* (48320); northern sea-lion, *Eumetopias stelleri* (48330); collared peccary, *Dicotyles tajacu* (48331); guanaco, *Lama guanaco* (48360); ruffed lemur, *Lemur varius* (48361); banded rattlesnake, *Crotalus horridus* (48562); canvasback duck, *Aythya valisineria* (48363); 2 specimens of European hedgehog, *Erinaceus europaeus* (48420); mule deer, *Capreolus macrotis* (48473); snowy owl, *Nyctea nyctea*, laughing kingfisher, *Dacelo gigas* (48474); gopher snake, *Spilotes corais couperii* (48475); baringha deer, *Cervus duracelli* (48476); 2 specimens of armadillo, *Tatusia novemcincta* (48600); spotted lynx, *Lynx rufus maculatus*, Alaska peninsula brown bear, *Ursus gyas* (48610); European hedgehog, *Erinaceus europaeus* (48611); pig-tailed monkey, *Macacus nemestrinus* (48612); 4 specimens of coyote, *Canis latrans* (48613); Eskimo dog, *Canis familiaris* (48614); mouflon *Ovis musimon* (48615); ocelot, *Felis pardalis* (48718); conure, *Conurus xanthogenius*, roseate spoonbill, *Ajaja ajaja* (48719); spring buck, *Antilocapra americana* (48720); bull snake, *Pituophis sayi* (48722); fisher, *Mustela pennanti* (48724); caracal, *Lynx caracal*, Tasmanian devil, *Sarcophilus ursinus* (48721); zebu, *Bos indicus* (48723); monkey, *Macacus speciosus* (48725); Canada goose, *Branta canadensis* (48726); native companion, *Grus australasiana*, great white egret, *Ardea egretta* (48906); gray kangaroo, *Macropus giganteus* (48907); red-shouldered hawk, *Buteo lineatus*, curassow, *Crax globiceps*, trumpeter swan, *Olor buccinator*, aoudad, *Ovis tragelaphus* (48909); Egyptian fla-

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mingo, *Phanocarpus antiquorum* (48947); king snake, *Ophibolus getulus*, rattlesnake, *Crotalus adamanteus* (48908); Virginia deer, *Capreolus virginianus* (48910); common macaque, *Macacus cynomolgus*, aoudad, *Ovis tragelaphus*, red deer, *Cervus elephas*, gray fox, *Urocyon virginianus*, ocelot, *Felis pardalis*, 2 specimens of nine-banded armadillo, *Tatusia novemcincta*, 2 specimens of viscacha, *Lagostomus trichodactylus* (48911); gray wolf, *Canis occidentalis*, capuchin, *Cebus hypoleucus*, 2 specimens of Rhesus monkey, *Macacus rhesus*, 4 specimens of common macaque, *Macacus cynomolgus*, spoonbill duck, *Spatula clypeata*, California valley quail, *Callipepla californica*, laughing gull, *Larus atricilla*, American white pelican, *Pelecanus erythrorhynchos* (48912).

National Museum, collected by members of the staff: Barber, H. S.: About 600 insects from Dorchester County, Md. (47685); red bat, *Lasiurus borealis* (48406); specimen of oak, *Quercus minor* (48716). Bartsch, Paul: 4 skulls of mammals (47846); frogs and a snake from Minnesota (47873); land and freshwater shells, chiefly Nalads, from the Mississippi Valley (47946); skull of an owl, probably the great horned owl, *Bubo virginianus* (47900). Bassler, R. S.: About 5,000 specimens of fossil invertebrates from the Paleozoic rocks of Tennessee and Virginia (47776). Gilmore, C. W.: Skin and skull of a Lemming, *Lemmus* (47994). Hrdlicka, Aleš: Terrapin from Rock Creek Park, D. C. (47536). Lyon, M. W., Jr.: 8 mammals from near Washington, D. C. (48413). Maxon, W. R.: Skin and skull of a rat, *Cupromys*, from Cuba (47903). Painter, J. H.: 100 plants cultivated in the District of Columbia (47600). Palmer, William: Cotton-tail rabbit, *Sylvilagus f. mallurus* (48412); white leeches from the Peaks of Otter, Bedford County, Va. (48576). Ridgway, Robert: A mol-

SMITHSONIAN INSTITUTION—Cont'd.

husk, and a small collection of reptiles and insects (47959). Riley, J. H.: 7 bats; skin and skull of a chipmunk and a mole (47658); red squirrels, *Sciurus hudsonicus loquax*, and the skull of a weasel, *Putorius* (48628); red squirrel, *Sciurus hudsonicus loquax* (48895). Rose, J. N.: 150 living plants, mainly Cactaceae, from Mexico and the southwestern section of the United States (48568); seeds of *Fouquieria* (48629); 68 living plants, Cactaceae, mainly from Arizona (48639); 73 living Cactaceae from the southwestern United States (48670); 20 specimens of living cacti from the southwestern United States (48708); 78 specimens of living cacti, mainly from Arizona (48711); 76 specimens of living plants, mainly Cactaceae, from the southwestern United States (48741, 48753); 44 living plants, mainly cacti, from California (48780). Seeger, G. A.: Green snake, *Cyclophis aestivus*, from Virginia (47787). Steele, E. S.: 189 plants from the vicinity of Washington, D. C. (47990). Stejneger, Leonhard: Reptiles, batrachians, beetles, mollusks, and isopods from Massachusetts (47760). Washington, Charles: Tree toad from the District of Columbia (48743); piece of wood overgrown with barnacles, from Chesapeake Beach (48818); tortoise, *Terrapene carolina*, from Chesapeake Beach (48833).

Models made in the Anthropological Laboratory: Cast of stone sculpture of a head in high relief (47616); plaster bust of a Vancouver Island woman, showing artificial deformation of the head (47665); plaster casts of stone implements (47827); casts of celt and supposed charm-stone (48065); 5 plaster busts of American Indians (48091); plaster casts of prehistoric stone implements exhibited in private collections at the Jamestown Exposition (48119); cast of a large

SMITHSONIAN INSTITUTION—Cont'd.

grooved stone ax belonging to the historical department of Iowa (48319); 2 casts of a stone gouge (48349); cast of banner-stone with drill core (48397); casts of a steel die originally used to stamp United States muskets at the Harpers Ferry Arsenal, and altered for the same use at Fayetteville, N. C., for the Confederate army (48463); cast of a Mexican god (48528); plaster cast of a medal or coin, date unknown, bearing a representation of the bust of "Christ" (48700); life-size lay figure groups, in boats, depicting Capt. John Smith trading for corn with Powhatan Indians (48781); lay figures illustrating the nations most prominent in the peopling of America, namely, Spanish lady and gentleman, the Dutch patroon and his wife, the Virginia planter and his wife, and the Puritan and his wife (48782); casts of 9 prehistoric stone implements (48887); models of a Viking ship and of the Santa Maria (48918).

Prepared in the Photographic Laboratory: 135 portraits of eminent persons associated with the discovery and history of America (48871); 18 colored enlargements of John White's paintings, the originals being in the Grenville collection of the British Museum (48772); photographs illustrating the history of the Capitol, copied from Glenn Brown's History of the Capitol (48773).

SMYTH, JOHN B., Renovo, Pa.: Lizard, *Eumeces anthracium*, from Pennsylvania (48762).

SNELLING, W. O., Washington, D. C.: Specimen of silver-cobalt ore from Cobalt, Ontario, Canada (47932).

SNYDER, E. C., Dixon, Iowa: Fossil brachiopod (48272); 5 specimens of Niagara fossils (48332).

SNYDER, W. E., Beaver Dam, Wis.: About 35 shells from various localities (48347).

- SOUTHERN RAILWAY COMPANY, Washington, D. C.: 3 large masses of copper ore from Ducktown, Tenn., and a mass of pyrite from Lumpkin County, Ga. (48300).
- SOUVIELLE, E. M., Jacksonville, Fla.: Tapeworm, *Cittotacnia* sp. (47650).
- SPAULDING, W. H., Rhyolite, Nev.: Specimen of praying mantis, *Stagmomantis carolina* (47887).
- SPENCER, A. L., Oenaville, Tex.: Specimen of helgramite fly, *Corydalis cornuta* (47582).
- SPINNING, H. L., McKeever, N. Y.: Water bug, *Amorgius americanum* (47678).
- SPRINGER, FRANK, Burlington, Iowa: Slab of *Uintacrinus socialis* (47783: deposit); collection of Japanese erinoidea, made by Alan Owston, of Yokohama (48497).
- STÄDTISCHES MUSEUM FÜR VÖLKERKUNDE. (See under Leipzig, Germany.)
- STAINS, WARREN L., Acoma, Nev.: Immature specimen of *Pseudosermyle truncata* (47829).
- STANDLEY, J. E., Seattle, Wash.: Unmounted photograph of native Hawaiian runners or message carriers (48344).
- STANDLEY, PAUL C., Agricultural College, N. Mex.: Specimen of cactus, *Opuntia arnaria*, from New Mexico (48882).
- STATE DEPARTMENT:
Crocodile skin transmitted by Eugene H. Plumacher, American consul, Maracaibo, Venezuela (48217).
Models, photographic enlargements, charts, flags, and etching, obtained for the International Maritime Exposition at Bordeaux, 1907 (48691).
- STEELE, E. S., Washington, D. C.: 352 plants collected in Virginia (47949: purchase; 47954); 27 plants from the vicinity of Washington, D. C. (48009).
- STERNBERG, CHARLES H., Lawrence, Kans.: Fossil turtle (48916: purchase).
- STEVENSON, MRS. M. C., Bureau of American Ethnology, Washington, D. C.: Meadow mouse, *Microtus aztecus* (47657).
- STODDARD, Dr. T. A., Culebra Hospital, Canal Zone, Panama: Bat, *Molossus*, grasshopper, *Titanaeris velazquezii* and a sphingid moth, *Diludia lichenia* (48284).
- STRECKER, JOHN K., jr., Waco, Tex.: 40 lots of shells from Texas (47847).
- STUART, Miss CATHARINE C., Washington, D. C.: An Onondaga Indian turtle rattle (48826); collection of brooches—specimens of Iroquoian silver work (48884); skirt of a Hupa Indian woman (48794). Purchase.
- STUIR, F. A., Portland, Oreg.: Skull of a mountain beaver, *Aplodontia* sp., and a puma, *Felis oregonensis* (48144); flying squirrel, *Sciuropterus*, and a mountain beaver, *Aplodontia* (48840).
- SUKSDORF, W. N., Bingen, Wash.: 297 plants from Washington State (48503: purchase).
- SUMSTINE, D. R., Wilkesburg, Pa.: 28 specimens of fungi from Pennsylvania and other localities (48803: exchange).
- SUTER, HENRY, Auckland, New Zealand: 9 rare species of shells, including one cotype, from New Zealand (48280).
- SUTRO, THEODORE, New York City: 13 historical marine paintings, by Edward Moran (48169: loan).
- SWARTHOUT, J. M., Bolivar, N. Y.: A specimen of *Cicada* sp., partly issuing from the pupa skin (48155).
- SWINGLE, MRS. L. W., Tucson, Ariz.: 16 packages of algae (48198: loan).
- TANNER, JAMES, Washington, D. C.: Philippine rain coat (47902).

- TASSIN, WIRT, U. S. National Museum: Monazite and zircon sands, and concentrates from Fallston, Cleveland County, N. C. (48550).
- TEUBER, F. B. von, Jamestown Exposition, Norfolk, Va.: Photograph of a group of Indians from the San Blas coast, Panama (47764).
- TEYLER'S MUSEUM. (See under Haarlem, Netherlands.)
- THOMPSON, Dr. J. C., U. S. Navy, Washington, D. C.: Fishes and a starfish from the Tortugas Islands, Florida (48158); 4 bats in alcohol from Shanghai, China (48414).
- THORNE, A. E., Twining City, D. C.: 2 specimens of the short-tailed shrew, *Blarina brevicauda* (48407).
- THORNTON, Dr. W. F., Bluefields, Nicaragua: About 30 mosquitoes (48815).
- THUROW, F. W., Harvester, Tex.: 10 living specimens of cacti, *Opuntia fuscoatra* (47975); 5 living specimens of cacti, *Opuntia* (47984); 5 plants from Texas (48130).
- TOUMEY, J. W., New Haven, Conn.: 887 specimens of Cactaceae, with photographs (48878: purchase).
- TOWER, W. V., Porto Rico Agricultural Experiment Station, Mayaguez, P. R.: 2 vials of mosquito larvae, containing about 100 specimens (47595); 2 vials of mosquito larvae (47676).
- TOWNSEND, C. H., New York City: 8 Devonian brachiopods from near Meadville, Crawford County, Pa. (48729).
- TRACY, S. M., Biloxi, Miss.: Fern from Florida (47573); specimen of living cactus, *Opuntia*, from Florida (48650).
- TRAPIER, The Misses, Washington, D. C.: Piece of Flemish point lace (fifteenth century), pair of baby mitts, and a damask spread with gold fringe (48799: loan).
- TRASK, Mrs. BLANCHE, Avalon, Cal.: Larva of sphinx moth, *Protoparce sexta* (47803); snake, *Lampropeltis boylii*, from California (47872);
- TRASK, Mrs. BLANCHE—Continued.
moth, *Apanteles proxima*; scorpions *Uroctonus mordax*; and a myriapod (48499); living specimen of cactus, *Opuntia*, from Santa Catalina Island (48529); 3 living plants from Santa Catalina Island (48669).
- TREASURY DEPARTMENT:
U. S. Mint, Philadelphia, Pa.: Half eagle, eagle, and double eagle (48770).
U. S. Public Health and Marine-Hospital Service, San Francisco, Cal.: Specimens of rats, *Mus norvegicus* and *M. rattus*, from San Francisco (48797).
- TREGANZA, EDWARD, Salt Lake City, Utah: 5 species of land and freshwater shells from Utah (48127).
- TREMOLERAS, JUAN, Museo Nacional, Montevideo, Uruguay: 3 lizards from Montevideo (48288); 2 snakes and a lizard from Argentina (48310); 6 birds' skins from Uruguay (48370). Exchange.
- TREMPER, Dr. R. H., Ontario, Cal.: 2 species of marine shells (48205); about 60 specimens of *Calliostoma supragranosum* from San Pedro, Cal. (48434).
- TRISTÁN, J. FID., San José, Costa Rica: Crabs from Costa Rica (48302).
- TRUE, F. W., U. S. National Museum: Twined basket tray made by the Yakutat Indians of southeastern Alaska (47582).
- TUCKER, E. S., Dallas, Tex.: 10 specimens representing 4 species of Dip-tera (48662).
- TURCKHEIM, Baron H. von, Coban, Guatemala: 250 plants from Guatemala (48458); 141 plants from Guatemala (48836). Purchase.
- TURNER, D. C., Washington, D. C.: Catbird, *Galeoscoptes carolinensis* (48703).
- TURNLEY, W. D., Dade City, Fla.: Praying mantis, *Gonatista grisea* (47761).
- UMBACH, L. M., Naperville, Ill.: 32 plants, *Laciniaria*, from Illinois and Indiana (48241).

- UNIVERSITY COLLEGE. (See under Dundee, Scotland.)
- UTAH ANTIMONY COMPANY, Butte, Mont.: Antimony oxide and stibnite from Antimony, Garfield County, Utah (48138).
- VAQUEZ, J., Pantin (Seine), France: 470 species of European fossil invertebrates; 3 boxes of fossils; 23 fossil plants (47720: exchange).
- VASEY, R. W., Rogers Park, Ill.: 6 plants, *Laciniaria*, from Illinois (47832).
- VAUGHAN, FRANCIS E., West Haven, Conn.: 7 stone implements (47903): human skull from Marthas Vineyard (48092); 12 arrow points from Arkansas (48561). Exchange.
- VEERHOFF, OTTO L., L. C. Handy *et al.*: 39 engravings, prints, and photographs illustrating scenes and landmarks connected with the history of the United States (48774).
- VELIE, Dr. J. W., St. Joseph, Mich.: A collection of fishes from Florida (47983); 2 crabs, *Panopeus herbstii*, and a shrimp, *Palaeomonetes exilipes* (48051).
- VERRILL, Prof. A. E., Yale University Museum, New Haven, Conn.: Invertebrates from Long Island Sound and Bermuda (48202); 3 isopods, *Leidyia* (48273).
- VIBERT, C. W., South Windsor, Conn.: Indian skull from an ancient Indian burial place in South Windsor (48190).
- VIENNA, AUSTRIA, BOTANICAL GARDEN AND INSTITUTE OF THE ROYAL UNIVERSITY: 13 specimens of fungi from Brazil (47571: exchange).
- VIENNA, AUSTRIA, ROYAL MUSEUM OF NATURAL HISTORY: Century 14 (embracing nos. 1301-1400, inclusive) of the "*Kryptogamae exsiccatae*" (48381: exchange).
- VOLKART, HENRY, St. Gallen, Switzerland: Photographs of Swiss-Danish heddles, and an Armenian Jew weaving; piece of an Armenian string, and a quadrangular board from Tunis (47779: exchange); old Swiss heddle (47780).
- VOORHEES, SAMUEL STOCKTON, Washington, D. C.: Archeological objects from Hamilton County, Ohio (48454).
- WALCOTT, BENJAMIN STUART, Washington, D. C.: 40 specimens of Devonian fossils from Seneca Lake, N. Y. (48167).
- WALKER, E. M., Toronto, Ontario, Canada: An Orthopteron (47819: exchange).
- WALLACE, Miss ELEANOR, New York City: Japanese traveler's candlestick (48261).
- WALSINGHAM, Lord, Merton Hall, Thetford, England: 19 paratypes of *Tineidae* (47598).
- WALTON, W. R., Harrisburg, Pa.: 3 specimens of *Nonagria permagna* (47828).
- WANSLEBEN, Miss E., Washington, D. C.: 2 specimens of Hymenoptera, *Evania* (47788).
- WAR DEPARTMENT:
- Office of Chief of Engineers*: Concretions and stumps of fossil trees from near Pierre, S. Dak. (48000).
- Office of Chief of Ordnance*: Springfield rifle of the model of 1903, with the improvements of 1905 (48386); 3 United States magazine rifles, caliber .30, model of 1903, with sword bayonets; 3 United States magazine gallery practice rifles, caliber .22, model of 1903, with sword bayonets; 6 sword bayonets for Springfield muskets, model of 1842 (48759).
- Surgeon-General's Office*: Collection of diatomaceous earths (48149).
- Army Medical Museum*: An Indian necklace and a beaded belt (48395).
- WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, N. Y.: 1,120 grams of Elm Creek, Kans., meteorite (47556); skull of a fossil beaked whale, *Choueziphius liops* (48046); skeleton of a porpoise, *Stenorostratus*, from Wellington, New Zealand (48555). Purchase.
- WARR, ALEX, King City, Cal.: 3 specimens of *Pecten* from the Upper Miocene of Monterey County, Cal. (48811).

- WASHINGTON BIOLOGISTS' FIELD CLUB, Washington, D. C.: About 800 insects from Plummer's Island, Md. (47933).
- WAYNE, ARTHUR T., Mount Pleasant, S. C.: 4 birds' skins (47673); 3 birds' skins (47752).
- WEBB, WALTER F., Rochester, N. Y.: 164 species of land-shells from the Mollendorff collection (48440: exchange).
- WEDESTAEDT, GEO. S. VON, Goldfield, Nev.: Fossil bones (leg and foot) of a camel, *Procamelus* (?) *robustus* (48775).
- WEINBERG, FRANK, Woodside, N. Y.: 7 living plants (47976: exchange).
- WEINSCHENCK, W. F., & Co., Jamestown Exposition, Norfolk, Va.: Box of solid alcohol and bottle of denatured alcohol, for lighting and heating (47855).
- WELLMAN, DR. F. CREIGHTON, Philadelphia, Pa. (through the American Society of Tropical Medicine): About 150 specimens of Diptera from Benguela, West Africa (47979).
- WHEELER, REV. H. E., Montevallo, Ala.: Land and fresh-water shells (47987); about 50 fresh-water shells from Alabama (48392); 6 specimens of Silurian corals from Greasy Cove, Ala. (48744).
- WHITE, DAVID, U. S. Geological Survey, Washington, D. C.: Fragments of fossil leaves from near Cache, Okla. (48204).
- WHITE, MAJ. JOHN R., director of prison colony, Puerta Princessa, Palawan, P. I. (received through Dr. E. A. Mearns, U. S. Army): 6 birds' skins from Palawan (48079).
- WHITE, R., Ybor City, Tampa, Fla.: Specimen of silicified gasteropod (48870).
- WIDGEON, JOHN, Baltimore, Md.: 12 Devonian fossils from the western part of Maryland (48023).
- WILCOX, GLENN A., Los Angeles, Cal.: 10 specimens of living Cactaceae from Arizona (47868).
- WILCOX, BRIG. GEN. T. E., U. S. Army (retired), Washington, D. C.: 2 specimens of cacti collected in Arizona (47777).
- WILCOX, WALTER, Washington, D. C.: Specimens of native copper, calcite, and quartz; fossil insect (48263).
- WILKINS, THOMAS M., Washington, D. C.: A grasshopper bicycle (48354).
- WILLIAMS, MRS. CAROLINE E., Quilcene, Wash.: Specimen of *Juncus arcticus* from Alaska (48281).
- WILLIAMS, HAMP, Hot Springs, Ark.: Sample of chalcedonic silica from near Hot Springs (47918).
- WILLIAMS, MISS HANNAH F., Wickliffe, Va.: Glass punch bowl captured from British officers at the surrender of Lord Cornwallis (12506: loan).
- WILLIAMS, I., La Salle, Ill.: Larva of a sphinx moth, *Thyreus abbottii* (47609).
- WILLIAMSON, E. B., Bluffton, Ind.: 2 paratypes of dragon fly, *Mnais carnhawi*, from Burma (47610: exchange); 51 insects from Texas, Indiana, and the Indian Territory (47716).
- WILLING, T. N., Regina, Saskatchewan, Canada: 18 mosquitoes and 20 larval skins (47599).
- WILLIS, MORRIS W., Woodstock, Fla.: Tropical orb-weaving spider, *Gasteracantha cancriformis* (48047).
- WILLISTON, DR. S. W., University of Chicago, Chicago, Ill.: 2 specimens of Tachinidae collected by Herbert H. Smith in Brazil (48417).
- WILMER, COL. L. WORTHINGTON, Lotherian House, Ryde, Isle of Wight, England: Rocks, living and fossil shells, head of a sea gull, insects, alcoholic worms (47620).
- WILSON, G. A., Lexington, Miss.: Sparrow hawk, *Cerchneis sparverius* (48176).
- WILSON, H. H., Townville, Pa.: 3 photographs and a sketch of "Indian God Rock" (47821).

- WILSON, HIRAM, Murphysboro, Ill.: Fossil plant, *Neuropteris vermicularis* (48067).
- WISE, K. S.: 12 mosquitoes from British Guiana (48077).
- WOOD, NELSON, U. S. National Museum: 2 young jungle fowls, *Gallus gallus*, (47844): mounted specimen of *Liothrix lutca*, and skin of a field sparrow, *Spizella pusilla* (48078): specimen of an insect, *Tabanus megerlei*, from Auburndale, Fla. (48103).
- WOOD, GEN. OLIVER ELLSWORTH, U. S. Army, Washington, D. C.: Collection of Japanese brasses, bronzes, lacquer, etc. (48785: loan).
- WOOTON, E. O., Mesilla Park, N. Mex.: 16 specimens and 4 photographs of cacti from New Mexico (48180): 8 specimens of cacti from New Mexico (48571).
- WORLAND, GEORGE T., Havre, Mont.: Specimens of Jurassic fossils (48869).
- WORTHINGTON, THOMAS C., jr., Baltimore, Md.: Photographs of red bat, *Lasiurus borealis*, and young (48260).
- WORTHINGTON, W. W., Shelter Island Heights, N. Y.: 2 valves of *Labiosa lineata* from Amelia Island, Fla. (47585).
- WRIGHT, A. C., Guadalajara, Mexico: Specimen of kissing bug, *Rasahus biguttatus* (47698).
- WRIGHT, W. S. (See under G. H. Field.)
- WROUGHTON, R. C., London, England: 127 Himalayan ferns (47940).
- YALE UNIVERSITY MUSEUM, New Haven, Conn.: Cast of neural cavity of the sacrum of a *Stegosaurus* (48311: exchange): 10 specimens of *Laciniaria* (48400: loan): 7 casts of *Ceratopsia* heads, and a cast of the entire animal (48467: exchange).
- YELLOWSTONE NATIONAL PARK, Yellowstone, Wyo. (received through Lieut. Gen. S. B. M. Young, superintendent): Skin and skull of a grizzly bear, *Ursus horribilis* (48200).
- ZOLLIKOFER, ERNST H., St. Gallen, Switzerland: 100 European mammals (47730: purchase).
- ZOOLOGICAL MUSEUM. (See under Copenhagen, Denmark.)

LIST OF PUBLICATIONS OF THE U. S. NATIONAL MUSEUM ISSUED DURING THE FISCAL YEAR 1907-8, INCLUDING PAPERS PUBLISHED ELSEWHERE WHICH RELATE TO THE COLLECTIONS.

PUBLICATIONS OF THE MUSEUM.

ANNUAL REPORT.

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| Smithsonian Institution United States
National Museum — Report on
the progress and con- dition of the
U. S. National Museum for the year | ending June 30, 1907 [Seal]
Washington Government Printing
Office 1907
Svo., pp. 1-118. |
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PROCEEDINGS.

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| Smithsonian Institution United States
National Museum — Proceedings
 of the United States National
Museum — Volume XXXII —
[Seal] Washington Government
Printing Office 1907
Svo., pp. 1-xvi, 1-767, pls.
1-LXXXII, figs. 168. | Smithsonian Institution United States
National Museum — Proceedings
 of the United States National
Museum — Volume XXXIII
 — [Seal] Washington Gov-
ernment Printing Office 1908
Svo., pp. 1-xv, 1-750, pls.
1-LXV, figs. 144. |
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BULLETINS.

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| Smithsonian Institution United States
National Museum — Bulletin
 of the United States National Mu-
seum. No. 50. — The Birds of
 North and Middle America. by
Robert Ridgway, Curator, Division
of Birds — Part IV. —
[Seal] Washington: Government
Printing Office. 1907.
Svo., pp. 1-xxii, 1-973, pls.
1-XXIV. | Recent Madreporaria of the Ha-
wailian Islands and Laysan by T.
Wayland Vaughan Custodian of
Madreporarian Corals, U.S. National
Museum Geologist, U. S. Geological
Survey [Seal] Washington Gov-
ernment Printing Office 1907
4to., pp. 1-ix, 1-427, pls.
1-XCVI. |
| Smithsonian Institution United States
National Museum Bulletin 58 —
Herpetology of Japan and Adja-
cent Territory by Leonhard Stej-
neger Curator, Division of Reptiles
and Batrachians — With 35
plates and 409 figures in the text
[Seal] Washington Government
Printing Office 1907
Svo., pp. 1-xx, 1-577, pls.
1-XXXV, figs. 1-490. | Smithsonian Institution United
States National Museum Bulletin
60 — The Barnacles (Cirripe-
dia) con- tained in the collections
of the U. S. National Museum
by Henry A. Pilsbry Special
Curator of the Department of Mol-
lusca, Academy of Natural Sci-
ences of Philadelphia [Seal]
Washington Government Printing
Office 1907
Svo., pp. 1-x, 1-122, pls.
1-XI, figs. 1-36. |

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| Smithsonian Institution United States
National Museum Bulletin 59 — | Smithsonian Institution United
States National Museum Bulletin |
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61 | — | Variations and Genetic |
Relationships of the | Garter-
Snakes | by | Alexander G. Ruth-
ven | Curator of the University Mu-
seum, University of Michigan, Ann

Arbor | [Seal] | Washington | Gov-
ernment Printing Office | 1908
8vo., pp. i-xii, 1-201, pl. I,
figs. 1-82.

PAPERS PUBLISHED IN SEPARATE FORM.

FROM VOLUME 33 OF THE PROCEEDINGS.

- No. 1556. An annotated list of Characin fishes in the United States National Museum and the museum of Indiana University, with descriptions of new species. By Carl H. Eigenmann and Fletcher Ogle. pp. 1-36, figs. 1-8.
- No. 1557. Descriptions of new species of upper paleozoic fossils from China. By George H. Girty. pp. 37-48.
- No. 1558. The holothurians of the North Pacific coast of North America collected by the Albatross in 1903. By Charles Lincoln Edwards. pp. 49-68, figs. 1-12.
- No. 1559. Descriptions of new species of recent unstalked crinoids from the North Pacific Ocean. By Austin Hobart Clark. pp. 69-84.
- No. 1560. Notes on parasites of Bermuda fishes. By Edwin Linton. pp. 85-126, pls. 1-xv.
- No. 1561. Descriptions of new species of recent unstalked crinoids from the coasts of Northeastern Asia. By Austin Hobart Clark. pp. 127-156.
- No. 1562. A review of the Cirrhitoid fishes of Japan. By David Starr Jordan and Albert Christian Herre. pp. 157-167, figs. 1, 2.
- No. 1563. On some earwigs (Forficulidae) collected in Guatemala by Messrs. Schwarz and Barber. By Andrew Nelson Caudell. pp. 169-176.
- No. 1564. New marine mollusks from the west coast of America. By Paul Bartsch. pp. 177-183.
- No. 1565. Supplementary notes on Martyn's Universal Conchologist. By William Healey Dall. pp. 185-192.
- No. 1566. Basketry holo case from Basilan Island. By Otis T. Mason. pp. 193-196, figs. 1-5.
- No. 1567. Descriptions of new North American Tineid moths, with a generic table of the family Blastobasidae. By Lord Walsingham. pp. 197-228.
- No. 1568. On a collection of fishes from the Philippine Islands, made by Maj. Edgar A. Mearns, surgeon, U. S. Army, with descriptions of several new species. By Alvin Seale and Barton A. Bean. pp. 229-248, figs. 1-8.
- No. 1569. The West American mollusks of the genus *Triphoris*. By Paul Bartsch. pp. 249-262, pl. xvi.
- No. 1570. On a collection of fishes from Echigo, Japan. By David Starr Jordan and Robert Earl Richardson. pp. 263-266, figs. 1-3.

- No. 1571. The Dragonflies (Odonata) of Burma and Lower Siam. — II. Subfamilies Cordulegasterinae, Chlorogomphinae, and Gomphinae. By Edward Bruce Williamson, pp. 267-317, figs. 1-39.
- No. 1572. Description of a new species of Killifish, *Lucania browni*, from a hot spring in Lower California. By David Starr Jordan and Robert Earl Richardson. pp. 319-321, 1 fig.
- No. 1573. North American parasitic copepods belonging to the family Caligidae. Parts 3 and 4.—A revision of the Pandarinae and the Cecropinae. By Charles Branch Wilson. pp. 323-490, pls. xvii-xliii, figs. 1-18.
- No. 1574. The Pyramidellid mollusks of the Oregonian faunal area. By William Healey Dall and Paul Bartsch. pp. 491-534, pls. xlii-xlviii.
- No. 1575. List of fishes collected in the river at Buytenzorg, Java, by Dr. Douglas Houghton Campbell. By David Starr Jordan and Alvin Seale. pp. 535-543, figs. 1, 2.
- No. 1576. A new Geckoid lizard from the Philippine Islands. By Leonhard Stejneger. pp. 545, 546.
- No. 1577. Mammals collected in western Borneo by Dr. W. L. Abbott. By Marcus Ward Lyon, jr. pp. 547-571, figs. A, B, 1 map.
- No. 1578. Two new species of toads from the Philippines. By Leonhard Stejneger. pp. 573-576.
- No. 1579. The pulque of Mexico. By Walter Hough. pp. 577-592, figs. 1-19.
- No. 1580. North American parasitic copepods: new genera and species of Caliginae. By Charles Branch Wilson. pp. 593-627, pls. xlix-lvi.
- No. 1581. A review of the flatheads, gurnards, and other mail-cheeked fishes of the waters of Japan. By David Starr Jordan and Robert Earl Richardson. pp. 629-670, figs. 1-9.
- No. 1582. Infrabasals in recent genera of the crinoid family Pentacrinitidae. By Austin Hobart Clark. pp. 671-676, figs. 1-8.
- No. 1583. A new species of flying lizard from the Philippine Islands. By Leonhard Stejneger. pp. 677-679.
- No. 1584. A new fresh-water bivalve (*Corneocyclas*) from the mountains of Ecuador. By Paul Bartsch. pp. 681, 682, 1 fig.
- No. 1585. The crinoid genus *Comatula* Lamarek; with a note on the *Enerinus parrae* of Guerin. By Austin Hobart Clark. pp. 683-688.
- No. 1586. On some Isopods of the family Dajidae from the north-west Pacific Ocean, with descriptions of a new genus and two new species. By Harriet Richardson. pp. 689-696, figs. 1-7.
- No. 1587. Notes on the fresh-water mollusk *Planorbis magnificus* and descriptions of two new forms of the same genus from the Southern States. By Paul Bartsch. pp. 697-700, pl. lvii.
- No. 1588. On *Ctenolucius* Gill, a neglected genus of Characin fishes, with notes on the typical species. By Barton A. Bean. pp. 701-703, 1 fig.

- No. 1589. Fresh-water crustacea from Labrador and Newfoundland. By Joseph A. Cushman. pp. 705-713, pls. LVIII-LXII.
- No. 1590. On a collection of Thysanopterous insects from Barbados and St. Vincent islands. By Henry James Franklin. pp. 715-730, pls. LXIII-LXV.
- No. 1591. Schizopod crustaceans in the U. S. National Museum: Schizopods from Alaska. By Arnold E. Ortmann. pp. 1-10, pl. I.

FROM VOLUME 34 OF THE PROCEEDINGS.

- No. 1592. Notes on a collection of fishes from the Gulf of Mexico at Vera Cruz and Tampico. By David Starr Jordan and Mary Cynthia Dickerson. pp. 11-22, figs. 1, 2.
- No. 1593. The parasitic Isopod *Leidyia Distorta* (Leidy) found on a new host. By Harriet Richardson. pp. 23-26, figs. 1-4.
- No. 1594. Descriptions of four new species of amphipodous crustacea from the Gulf of Mexico. By Arthur S. Pearse. pp. 27-32, figs. 1-4.
- No. 1595. Description of *Pantosteus Santa-Anae*, a new species of fish from the Santa Ana River, Cal. By John Otterbein Snyder. pp. 33, 34.
- No. 1596. The *Dalmanellas* of the Chenung formation, and a closely related new Brachiopod genus *Thiemella*. By Henry S. Williams. pp. 35-64, pls. II-IV.
- No. 1597. Descriptions of three new species of Saturniian moths. By William Schaus. pp. 65, 66.
- No. 1598. Description of a new Isopod of the genus *Eurycope* from Marthas Vineyard. By Harriet Richardson. pp. 67-69, figs. 1, 2.
- No. 1599. Notes on some Western Orthoptera; with the description of one new species. By Andrew Nelson Caudell. pp. 71-81.
- No. 1600. On the revision of the mollusk genus *Pterinea* Goldfuss. By Henry Shaler Williams. pp. 83-90.
- No. 1601. Descriptions of new species of South American Geometrid moths. By William Warren. pp. 91-110.
- No. 1602. Description of a new species of halfbeak (*Hemiramphus mloprognus*) from Nagasaki, Japan. By David Starr Jordan and Mary Cynthia Dickerson. pp. 111, 112, 1 fig.
- No. 1603. Foraminifera collected near the Hawaiian Islands by the steamer Albatross in 1902. By Rufus Mather Bagg, jr. pp. 113-172, pl. V.
- No. 1604. Descriptions of new Curculionid beetles of the tribe Anthonomini. By W. Dwight Pierce. pp. 173-181.
- No. 1605. On three existing species of sea turtles, one of them (*Caretta remivaga*) new. By Oliver P. Hay. pp. 183-198, pls. VI-XL.
- No. 1606. Three new species of lizards from the Philippine Islands. By Leonhard Stejneger. pp. 199-204, figs. 1-6.

- No. 1607. New stalked crinoids from the eastern coast of North America. By Austin Hobart Clark. pp. 205-208, figs. 1-3.
- No. 1608. Descriptions of new species of crinoids, chiefly from the collections made by the U. S. fisheries steamer Albatross at the Hawaiian Islands in 1902; with remarks on the classification of the Comatulida. By Austin Hobart Clark. pp. 209-239.
- No. 1609. A new Amphipod crustacean, *Orchestoidea biolleyi*, from Costa Rica. By Thomas R. R. Stebbing. pp. 241-244, pl. xii, figs. 1, 2.
- No. 1610. Descriptions of new species of mollusks from the Pacific coast of the United States, with notes on other mollusks from the same region. By William Healey Dall. pp. 245-257.
- No. 1611. New species of cretaceous invertebrates from northern Colorado. By Julius Henderson. pp. 259-264, pl. xiii.
- No. 1612. Some cases of abnormal arm structure in recent crinoids. By Austin Hobart Clark. pp. 265-270, figs. 1-5.
- No. 1613. The crinoid genus *Endocrinus*, with description of a new species. By Austin Hobart Clark. pp. 271-279, figs. 1-11.

FROM VOLUME 10 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 5. Report on the diatoms of the Albatross voyages in the Pacific Ocean, 1888-1904. By Albert Mann. (Assisted in the bibliography and citations by P. L. Ricker.) pp. i-viii, 221-442, pls. XLIV-LIV.

Part 6. The Cyperaceae of Costa Rica. By C. B. Clarke (deceased). pp. i-vii, 443-471.

Part 7. Studies of tropical American ferns.—No. 1. By William R. Maxon. pp. i-viii, 473-508, pls. LV-LVI.

FROM VOLUME 12 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 1. Catalogue of the botanical library of John Donnell Smith presented in 1905 to the Smithsonian Institution. Compiled by Alice Cary Atwood. pp. i-iii, 1-94.

Part 2. The *Lechthythidaceae* of Costa Rica. By H. Pittier de Fábrega. pp. i-vii, 95-101, pls. i-viii, figs. 1-4. *Tonduzia*, a new genus of *Apocynaceae* from Central America. By H. Pittier de Fábrega. pp. 103-104, pl. ix, figs. 5, 6. A collection of plants from the vicinity of La Guaira, Venezuela. By J. R. Johnston. pp. 105-111.

Part 3. Types of American grasses. By A. S. Hitchcock. pp. i-v, 113-158, i-v.

CLASSIFIED LIST OF PAPERS BASED WHOLLY OR IN PART ON THE NATIONAL COLLECTIONS.^a

MUSEUM ADMINISTRATION.

RATHBUN, RICHARD. Report on the progress and condition of the U. S. National Museum for the year ending June 30, 1907.

Rep. Smithsonian Inst. (U. S. Nat. Mus.), 1907, pp. 1-118.

FINE ARTS.

BROCKETT, PAUL. The National Gallery of Art.

The Sketch Book, vi, No. 6, Nov., 1907, pp. 269-276, 5 pls.

ETHNOLOGY, ARCHEOLOGY, PHYSICAL ANTHROPOLOGY.

EMMONS, GEORGE T. The Chilkat blanket.

Memoirs, Am. Mus. Nat. Hist., III, Pt. IV, Dec., 1907, pp. 329-401, pls. xxiv-xxvii, figs. 536-592. (Based partly on Museum specimens.)

This paper is an exhaustive monograph on the "Chilkat blanket," an exquisite piece of weaving in wool, harmonious in coloring, and original in design, which forms the distinctive ceremonial robe of the several tribes of the North Pacific coast. The paper begins with the traditional and actual history of the blanket, which is followed by a discussion of the technique. The designs are explained by Dr. Franz Boas. Mr. Emons's material was collected from Chilkat sources almost exclusively and forms a valuable contribution to our knowledge of the textile works of the American Indians.

FEWKES, J. WALTER. Excavations at Casa Grande, Ariz., in 1906-7.

Smithsonian Misc. Colls., L, Quar. Issue, Pt. 3, No. 1773, Oct. 25, 1907, pp. 289-329, pls. xxiii-xl, figs. 117-122.

The paper is a report of progress on certain unfinished archeological work conducted by Doctor Fewkes under a special appropriation, and on the repair and protection of the Casa Grande ruins, and describes the work of the year 1906-7, illustrating the ruins exposed and giving detailed plans of the buildings and inclosures. Incidentally, a number of the relics of art obtained during the explorations and placed in the Museum are described and illustrated.

HOLMES, WILLIAM H. On a nephrite statuette from San Andrés Tuxtla, Vera Cruz, Mexico.

Am. Anthropologist (n. s.) ix, No. 4, Oct.-Dec., 1907, pp. 691-701, pls. xxxiv-xli.

The paper records all data acquired regarding the origin of a most remarkable specimen of jade carving, reputed to have been plowed up at San Andrés. The specimen is carefully described and the several series of glyphic decorations engraved on its surface have been studied by the best American experts in this field, and the views of these experts are included in the paper.

HOUGH, WALTER. Antiquities of the Upper Gila and Salt River valleys in Arizona and New Mexico.

Bull. XXXV, Bur. Am. Eth., 1907, pp. 1-96, pls. i-xi, figs. 1-51.

The bulletin is a catalogue of the ruins in the region mentioned in the title and embodies plans and descriptions of the locations of various antiquities, mainly discovered by the author during explorations carried on under the auspices of the National Museum during 1901, 1903, 1905, collections from which are in the National Museum. It is preceded by a short résumé of the geographic history of the ancient and recent inhabitants and the culture of the region. The ruins are described in some detail and are located on a map. There is also a bibliography. Much of the work was rendered possible by the generous cooperation with the Museum of Mr. P. G. Gates, of Pasadena, Cal.

^a In a few instances papers which were published prior to this fiscal year are included, having been omitted inadvertently from previous reports.

HOUGH, WALTER. Proceedings of the Anthropological Society of Washington. Meetings from November 15, 1907, to May 26, 1908.

Am. Anthropologist (n. s.) x, Nos. 1 and 2, Jan.-Mar., 1908, and May-June, 1908, pp. 117-121, and 285-295, respectively.

Abstracts and résumés of papers read before the society. Some of these papers are based upon the collections of the National Museum.

— Anthropology in education for the foreign service.

Am. Anthropologist (n. s.) ix, No. 4, Oct.-Dec., 1907, pp. 768-770.

This paper embodies a suggestion that consuls, on appointment, should be instructed in the work of the various governmental institutions in Washington, acquiring information useful to them in the pursuit of their duties in foreign countries. The paper asserts that the basis of such education is anthropological and recommends that the Smithsonian Institution and its bureaus be utilized to furnish practical instruction as to racial traits and arts.

— The pulque of Mexico.

Proc. U. S. Nat. Mus., xxxiii, No. 1579, Feb. 18, 1908, pp. 577-592, figs. 1-19.

This paper is the result of the study of the collections in the National Museum relating to the pulque industry, mostly procured by Dr. Edward Palmer, supplemented by the author's personal examination of the industry in the field. The origin of the use of pulque is discussed and a brief statement of the

HOUGH, WALTER.—Continued.

great importance of the plant in the civilization of Mexico is set forth.

HRDLÍČKA, ALEŠ. Skeletal remains suggesting or attributed to early man in North America.

Bull. XXXIII, Bur. Am. Eth., 1907, pp. 1-113, pls. i-xxi, figs. 1-16.

A review and critical examination of all such osteological specimens in North America as have been claimed, or seemed, to represent a geologically ancient man on this continent. The finds dealt with are the New Orleans skeleton; the Quebec skeleton; the Natchez pelvic bone; the Lake Monroe, Fla., bones; the Soda Creek skeleton; the Charleston, S. C., bones; the Calaveras skull; the Rock Bluff, Ill., cranium; the man of Peñon, Mexico; the crania of Trenton; the Trenton femur; the Lansing skeleton; the fossils of western Florida; and the Nebraska "Loess man." The conclusions reached are that thus far there are no solid foundations for considering any of the specimens of geological antiquity. The paper is supplemented by a description of a number of modern low-forehead skulls from the National Museum collections.

MASON, OTIS T. Basketry bolo case from Basilan Island.

Proc. U. S. Nat. Mus., xxxiii, No. 1566, Oct. 25, 1907, pp. 193-196, figs. 1-5.

Structurally, this object illustrates the technical processes utilized by the primitive peoples of Malaya in bamboo and rattan. Functionally, it takes the place of the traveling bag of the more civilized peoples.

MAMMALS.

ALLEN, J. A. Notes on *Solenodon paradoxus* Brandt.

Bull. Amer. Mus. Nat. Hist., xxiv, June 8, 1908, pp. 505-517, pls. xxviii-xxxiii, figs. 1-9.

Describes (not as new) the Haitian *Solenodon paradoxus* and makes comparisons between it and the Cuban *S. cubanus*, three specimens of the latter being lent to Doctor Allen for that purpose. Skull of Cat. No. 37983 U. S. National Museum is figured on pls. xxix, xxx, and xxxi.

CARY, MERRITT. A Colorado record for *Callospermophilus wortmani*, with notes on the recent capture of *Antrozous pallidus*.

Proc. Biol. Soc. Washington, xx, Dec. 11, 1907, pp. 85, 86.

Records *Callospermophilus wortmani* as new for Colorado from specimens in the Biological Survey collection; and makes remarks on the occurrence of *Antrozous pallidus* in Colorado.

LYON, MARCUS WARD, jr. Notes on a collection of mammals from the province of Kan-su, China.

Smithsonian Misc. Colls., 1, Quar. issue, Pt. 2, No. 1726, July 9, 1907, pp. 133-138, pls. xv-xvi.

Systematic account of small collection of mammals made in the province of Kan-su by W. W. Simpson. New species: *Myotaila cansus*, p. 134; *Ochotona cansus*, p. 136.

— Mammals collected in western Borneo by Dr. W. L. Abbott.

Proc. U. S. Nat. Mus., xxxiii, No. 1577, Dec. 24, 1907, pp. 547-572, figs. A and B, and map.

A systematic account of mammals collected by Dr. W. L. Abbott in western Borneo in 1905. New species: *Sciurus sanggans*, p. 554; new subspecies, *Sciurus borneensis palustris*, p. 553.

— On a collection of mammals from the Batu Islands, west of Sumatra.

Ann. Mag. Nat. Hist., 8th ser., 1, No. 2, Feb., 1908, pp. 136-140.

A systematic list of a small collection of mammals in the British Museum from some of the Batu group. Sent for identification and comparison with types of Malayan mammals in the U. S. National Museum. New species: *Cynocephalus icellonis*, p. 139, type in British Museum.

MERRIAM, C. HART. Descriptions of ten new kangaroo rats.

Proc. Biol. Soc. Washington, xx, July 22, 1907, pp. 74-79.

Descriptions of the following new species and subspecies, all but one in the Biological Survey collection: *Dipodomys spectabilis cratodoni*, p. 75; *D. nelsoni*, p. 75; *D. platycephalus*, p. 76; *D. margaritae*, p. 76; *D. insularis*, p. 77; *D. merriami kernensis*, p. 77; *Perodipus stephensi*, p. 78 (Merriam collection); *P. Moroccanis*, p. 78; *P. perplexeus*, p. 79; *P. simulans peninsularis*, p. 79.

— Three new rodents from Colorado.

Proc. Biol. Soc. Washington, xxi, June 9, 1908, pp. 143, 144.

Describes three new subspecies from specimens in the Biological

MERRIAM, C. HART—Continued.

Survey collection: *Eutamias minimus caryi*, p. 143; *Neotoma albigula warreni*, p. 143; *Thomomys talpoides agracis*, p. 144.

— Four new rodents from California.

Proc. Biol. Soc. Washington, xxi, June 9, 1908, p. 145-147.

Based on specimens in Biological Survey collection. New species: *Thomomys meica*, p. 146. New subspecies: *Microtus mordax bernardinus*, p. 145; *M. oregoni adocetus*, p. 145; *Thomomys alpinus awahnee*, p. 146.

MILLER, GERRIT S., jr. Some new European Insectivora and Carnivora.

Ann. Mag. Nat. Hist., 7th ser., xx, No. 119, Nov., 1907, pp. 380-398.

Describes ten new European mammals of the genera *Crocidura*, *Vulpes*, *Meles*, *Putorius*, and *Felis*, from material in the British Museum.

— Four new European squirrels.

Ann. Mag. Nat. Hist., 7th ser., xx, No. 119, Nov., 1907, pp. 426-430.

Describes four new subspecies of the European squirrel, *Sciurus vulgaris*, from specimens in the British Museum.

— Two new mammals from Asia Minor.

Ann. Mag. Nat. Hist., 8th ser., 1, No. 1, Jan., 1908, pp. 68-70.

Describes a new species of *Neomys* and of *Muscardinus* from material in the British Museum.

— The recent voles of the *Microtus nivalis* group.

Ann. Mag. Nat. Hist., 8th ser., 1, No. 1, Jan., 1908, pp. 97-103.

Creates the subgenus *Chinomys* for the *Microtus nivalis* group describing all the members of the subgenus, including three new species and one new subspecies. Based on material in the British Museum.

— Altum's squirrel names.

Ann. Mag. Nat. Hist., 8th ser., 1, No. 1, Jan., 1908, pp. 127, 128.

Discusses the status of some names applied to forms of the European squirrel by Altum in the second edition of Forstzöologie, 1876.

MILLER, GERRIT S., jr. Eighteen new European voles.

Ann. Mag. Nat. Hist., 8th ser.,
1, No. 2, Feb., 1908, pp. 194-
206.

Describes 18 new species and subspecies in the genera *Erotomys*, *Arvicola*, *Microtus*, and *Pitymys*, mainly from material in the British Museum.

NELSON, E. W. Descriptions of new North American rabbits.

Proc. Biol. Soc. Washington,
xx, July 22, 1907, pp. 81-84.

Descriptions of the following new species and subspecies all in the collection of the Biological Survey: *Lepus californicus magadalenar*, p. 81; *Sylvilagus cognatus*, p. 82; *S. floridanus restrictus*, p. 82; *S. floridanus similis*, p. 82; *S. auduboni vallicola*, p. 82; *S. auduboni cedrophilus*, p. 83; *S. auduboni neomexicanus*, p. 83; *S. auduboni warreni*, p. 83; *S. mansuetus*, p. 83; *S. bachmani crignus*, p. 84.

— Descriptions of two new subspecies of North American mammals.

Proc. Biol. Soc. Washington,
xx, Dec. 11, 1907, pp. 87, 88.

Describes as new subspecies: *Lepus baileyi cascadenensis*, p. 87 (in the Museum of Comparative Zoology) and *Sciurus uictalis littoralis*, p. 87, Biological Survey collection.

NICHOLS, JOHN TREADWELL. Notes on two porpoises captured on a voyage into the Pacific Ocean.

Bull. Amer. Mus. Nat. Hist.,
xxiv, Feb. 26, 1908, pp.
217-219, pl. xiv, figs. 1-3.

Describes (not as new) two porpoises secured by the writer in the

NICHOLS, JOHN TREADWELL.—Cont'd.

Pacific Ocean and makes comparison with specimens in the U. S. National Museum.

OSGOOD, WILFRED H. A new white-footed mouse from Alaska.

Proc. Biol. Soc. Washington,
xxi, June 9, 1908, pp. 141,
142.

Describes the new species, *Peromyscus hylaeus*, p. 141, Biological Survey collection.

TRUE, F. W. Observations on the type specimen of the fossil cetacean *Anoplomassa forcipata* Cope.

Bull. Mus. Comp. Zool., li, No.
4, July, 1907, pp. 97-106,
pls. 1-111.

— On the occurrence of remains of fossil cetaceans of the genus *Schizodelphis* in the United States, and on *Priscodelphinus* (?) *cras-sangulum* Case.

Smithsonian Misc. Coll., l,
Quar. Issue, pt. 4, No. 1782,
Jan. 27, 1908, pp. 449-460,
pls. LIX-LX.

— Remarks on the fossil cetacean *Rhabdosteus latiradix* Cope.

Proc. Acad. Nat. Sci., Phila.,
Apr. 22, 1908, pp. 24-29, one
plate, figs. 1-3.

— Occurrence of three species of beaked whales of the genus *Mesoplodon* on the Atlantic coast of the United States.

Science (n. s.), xxvi, No. 675,
Dec. 6, 1907, p. 796.

BIRDS.

BANGS, OUTRAM. On a collection of birds from western Costa Rica.

Auk, xxiv, No. 3, July, 1907, pp.
287-312.

An annotated list of 238 species and subspecies collected in the Boruca district of Costa Rica. Twelve forms are recorded as not hitherto known from this country, and the following are described as new to science: *Microastur interstes* (p. 289), *Gymnocichla nudiceps erratilis* (p. 297), *Synallaxis albescens latitabunda* (p. 298), *Dendrocopates sancti-thomae hesperius* (p. 299), *Leptopogon pileatus faustus* (p. 300), *Cyanerpes lucidus isthmicus*

BANGS, OUTRAM.—Continued.

(p. 306), and *Buarremon costaricensis* (p. 310).

— On certain Costa Rican birds.

Proc. New Engl. Zool. Club, iv,
Mar. 19, 1908, pp. 23-35.

Remarks on 18 forms of Costa Rican birds, of which the following are designated as new: *Trogon underwoodi* (p. 24), *Pachyrhamphus versicolor costaricensis* (p. 26), *Myiobius zanthopygus aureatus* (p. 27), *Tragodytes ochraceus ligea* (p. 29), *Myioborus aurantiacus acceptus* (p. 30), *Phlogothraupis sanguinolenta aprica* (p. 31), and *Emberizoides sphenura lucaris* (p. 34).

BANGS, OUTRAM, and PECK, MORTON E.
On some rare and new birds from
British Honduras.

Proc. Biol. Soc. Wash., xxi,
Feb. 29, 1908, pp. 43-46.

Limnopardalus maculatus tasoltus
(p. 43), *Antrostomus badius* (p. 44),
Troglodytes irrequies (p. 45), and
Coturniculus sacannarum craccus
(p. 45) are described as new, and
remarks are offered on seven other
species.

CARRIKER, M. A., jr. Brief descrip-
tions of some new species of birds
from Costa Rica and a record of
some species not hitherto reported
from that country.

Annals Carnegie Mus., iv, Nos.
iii and iv, Apr., 1908, pp.
301-302.

Formicarius castaneiceps and
Sporophila crissalis are described as
new, and seven other species are
noted as "new records from Costa
Rica."

COOKE, WELLS W. Bird migration in
the District of Columbia.

Proc. Biol. Soc. Wash., xxi,
Apr. 11, 1908, pp. 107-118.

A complete list of the birds of the
District of Columbia, with the dates
of arrival and departure of the
migratory species, and dates of oc-
currence of the "rare or casual
visitors." 293 species are enu-
merated.

KIRKWOOD, F. C. Chestnut-collared
longspur (*Calcarius ornatus*) in
Maryland.

Auk, xxv, No. 1, Jan., 1908, p.
84.

First record of the chestnut-col-
lared longspur from Maryland.

MEARNS, EDGAR A. Two additions to
the avifauna of the Philippines.

Philippine Journ. Sci., II, No. 5,
Sect. A, Oct., 1907, p. 353.

Butorides spodiogaster and *Spodi-
opsar cineraceus* are noted as new to
the Philippine avifauna.

— Descriptions of a new genus and
nine new species of Philippine birds.

Philippine Journ. Sci., II, No. 5,
Sect. A, Oct., 1907, pp. 355-
360.

The following species, obtained
during the author's explorations in
the Philippines, are described as
new: *Malindangia mcgregori* (p.
355), *Centropus carpenteri* (p. 356),
Cyornis mindorensis (p. 356), *Rhipi-
dura hutchinsoni* (p. 357), *Hypsi-*

MEARNS, EDGAR A.—Continued.

ptes batanensis (p. 357), *Merula
malindangensis* (p. 357), *Merula
mayonensis* (p. 358), *Geocichla min-
danensis* (p. 359), and *Zosterops
halconensis* (p. 360). *Malindangia*
(p. 355) is a new genus of *Campe-
phagidae*.

MILLER, W. DEWITT. A review of the
manakins of the genus *Chiroxiphia*.

Bull. Am. Mus. Nat. Hist., xxiv,
Art. xix, May 2, 1908, pp.
331-343, pl. xxv.

The author recognizes 8 species,
of which *Chiroxiphia napensis* (p.
338) is described and figured as
new. Each species is fully dis-
cussed, and a key to the various
forms, followed by a table of meas-
urements, completes the paper.

OBERHOLSER, HARRY C. A new *Agelaius*
from Canada.

Auk, xxiv, No. 3, July, 1907,
pp. 332-336.

Agelaius phoeniceus areolegus is
described as new (p. 332).

PECK, MORTON E. (See under Out-
ram Bangs.)

RIDGWAY, ROBERT. The Birds | of |
North and Middle America: | A
descriptive catalogue | of the |
higher groups, genera, species, and
subspecies of birds | known to occur
in North America, from the | Arctic
lands to the Isthmus of Panama, |
the West Indies and other islands |
of the Caribbean Sea, and the | Gal-
apagos Archipelago. | By | Robert
Ridgway | Curator, Division of
Birds | — | Part IV | Family
Turdidae—Thrushes. | Family Zele-
donidae—Wren-Thrushes. | Family
Mimidae—Mockingbirds. | Family
Sturnidae—Starlings. | Family Plo-
ceidae—Weaver Birds. | Family
Alaudidae—Larks. | Family Oxy-
runcidae—Sharp-bills. | Family Ty-
raunidae—Tyrant Flycatchers. |
Family Pipridae—Manakins. | Fam-
ily Cotingidae—Chatterers. | — |
Washington: | Government Print-
ing Office. | 1907. |

Bull. 50 (Pt. iv) *U. S. Nat.
Mus.* pp. 1-xxii, 1-973, pls.
1-xxxiv, July 1, 1907.

The present volume embraces 424
species and subspecies and 105 gen-
era, distributed through the above
families. The diagnostic characters

RIDGWAY, ROBERT—Continued.

of the genera are illustrated by 119 outline drawings in the 34 plates accompanying the volume.

Zelodonias insperata (p. 72), *Sem-narchus* (p. 689), and *Myiarchus magister nelsoni* (p. 903), are new.

REPTILES AND BATRACHIANS.

HAY, OLIVER P. On three existing species of sea-turtles, one of them (*Caretta remiavaga*) new.

Proc. U. S. Nat. Mus. xxxiv, No. 1605, May 4, 1908, pp. 183-198, pls. vi-xi.

Caretta remiavaga, new species; type, No. 9973, U. S. National Museum. All of the material upon which this paper is based is in the National Museum.

RUTHVEN, ALEXANDER G. Variations and Genetic Relationships of the Garter-Snakes | by | Alexander G. Ruthven | curator of the University Museum, University of Michigan, Ann Arbor | [seal] | Washington | Government Printing Office | 1908.

Bull. U. S. Nat. Mus. No. 61, June 24, 1908, pp. i-xii, 1-201, pl. 1, figs. 1-82.

A monographic treatment of the genus *Thamnophis*, tracing the probable origin and genetic relation of the various species and subspecies. The paper is based largely upon material in the National Museum, and also on collections in the possession of the author, as well as in the museums at Philadelphia, Chicago, and New York.

STEJNEGER, LEONHARD. Herpetology of Japan and Adjacent Territory | by | Leonhard Stejneger | Curator, Division of Reptiles and Batrachians | — | With 35 plates and 409 figures | In the text | [seal] | Washington | Government Printing Office | 1907.

Bull. U. S. Nat. Mus., No. 58, Aug. 9, 1907, pp. i-xx, 1-577, pls. i-xxxv, figs. 1-409.

A full account of the batrachians and reptiles of Japan, including Formosa and Sakhalin, Korea, and Manchuria, based upon the study of more than 1,500 specimens, mostly in the National Museum, but numerous types and other specimens in the British Museum and in the mu-

RIDGWAY, ROBERT—Continued.

With the completion of this part, the number of species and subspecies described reaches a total of 1,675, or a little more than half of the known forms of North and Middle America.

STEJNEGER, LEONHARD—Continued.

seums of Tokyo, Leiden, Hamburg, Frankfurt a/M, etc., were also examined.

— A new geckoid lizard from the Philippine Islands.

Proc. U. S. Nat. Mus. xxxiii, No. 1576, Dec. 24, 1907, pp. 545, 546.

Luperosaurus macgregori, new species; type No. 36191, U. S. National Museum.

— Two new species of toads from the Philippines.

Proc. U. S. Nat. Mus., xxxiv, No. 1578, Feb. 18, 1908, pp. 573-576.

Phrynoxalus anulatus, new species; type, No. 35399; *Kalophrynus stellatus*, new species; type, No. 37375, U. S. National Museum.

— A new species of flying lizard from the Philippine Islands.

Proc. U. S. Nat. Mus., xxxiii, No. 1583, Feb. 29, 1908, pp. 677-679.

Draco mindanensis, new species; type, No. 37388, U. S. National Museum.

— Three new species of lizards from the Philippine Islands.

Proc. U. S. Nat. Mus., xxxiv, No. 1606, May 4, 1908, pp. 199-204.

Sphenomorphus atrigularis, new species; type, No. 37386, U. S. National Museum; *Sphenomorphus steerei*, new species; type, No. 32658, U. S. National Museum; *Tropidophorus misaminius*, new species; type, No. 37383, U. S. National Museum.

— The status of the Japanese soft-shelled turtles.

Science (n. s.), xxvii, No. 697, May 8, 1908, pp. 746-748.

Supplementary notes to the treatment of the subject in *The Herpetology of Japan*.

FISHES.

BEAN, BARTON A. A lump-fish from Chesapeake Bay.

Forest and Stream, LXIX, No.

5, Aug. 3, 1907, pp. 178-179.

An authentic record of the capture of *Cyclopterus lumpus*, in Chesapeake Bay near Fortress Monroe.

— On *Ctenolucius* Gill, a neglected genus of Characin fishes, with notes on the typical species.

Proc. U. S. Nat. Mus., XXXIII,

No. 1588, Mar. 4, 1908, pp.

701-703, 1 fig.

Establishing the genus *Ctenolucius*, for many years overlooked.

(See also under Alvin Seale.)

DICKERSON, MARY CYNTHIA. (See under David Starr Jordan.)

EIGENMANN, CARL H., and OGLE, FLETCHER. An annotated list of Characin fishes in the U. S. National Museum and the museum of Indiana University, with descriptions of new species.

Proc. U. S. Nat. Mus., XXXIII,

No. 1556, Sept. 10, 1907, pp.

1-36, figs. 1-8.

One hundred and twenty fishes are listed and the following are described as new: *Curimatus brevipes*; *C. leuciscus bolivianus*; *Prochilodus leani*; *Parodon paraguayensis*; *P. phaeicabae*; *Leporinus parae*; *Chirodon ribeiroi*; *C. micropterus*; *Odonostilbe microcephalus*; *Aphyocharax rathbuni*; *A. stramineus*; *Holopristes riddlei*; *Hemigrammus micropterus*; *H. tridens*; *H. boulengeri*; *H. anisitsi*; *H. santae*; *H. incantans*; *Astyanax rutilus micrargensis*; *A. emperador*; *A. orthodus*; *A. atratoensis*; *A. megalops*; *Charax atratoensis*.

GILL, THEODORE. The remarkable story of a Greek fish, the *Glanis*.

Geo. Washington Univ. Bull.,

v, No. 4, Dec., 1906, pp. 5-

13, figs. 1-3.

After a reference to the Wels (*Silurus glanis*), the various passages of Aristotle relative to the *Glanis* are reproduced. References to them by Cuvier and Valenciennes, Apostolides, Smith, and Boulenger connecting them with the Wels are noticed. The differences between the Wels and *Glanis* are then contrasted, and agreement is declared with Agassiz, Garman, Jordan, and

GILL, THEODORE—Continued.

Hoffman, who recognized the *Glanis* as a very distinct species—*Parasilurus aristotelis*. It is for the first time illustrated by 3 figures obtained from the Smithsonian Institution.

— Le Tondule (*Fundula cyprinodonta*) of Carbonnier an *Umbra*.

Science (n. s.), xxiv, No. 625,

Dec. 21, 1906, pp. 818-819.

The fish observed by Carbonnier was erroneously named and was an *Umbra*, the *Umbra pygmaea* or Mud-fish of New York.

— The work of Pterophryne and the flying-fishes.

Science (n. s.), xxv, No. 628,

Jan. 11, 1907, p. 63.

The so-called nest attributed in 1871 to the Antennarid fish by L. Agassiz was really the result of a flying-fish's oviposition. The Pterophryne oviposits and makes a raft like the Angler (*Lophius piscatoris*).

— Note on the genus *Kuhlia*.

Proc. Acad. Nat. Sci. Phila.,

Apr., 1907, p. 150.

In contradiction of H. W. Fowler, it is claimed that the name *Dules* should be reserved for *D. anruga* and the second section should retain the name *Kuhlia*, given in 1861.

— [Parental care exercised by the Osteoglossoid fish *Scelopropages formosus*.]

Science (n. s.), xxv, No. 648,

May 31, 1907, p. 863.

A note on Fuhrmann's observation.

— The lumpsucker, its relationship and habits.

Smithsonian Misc. Colls., L,

Quar. Issue, Pt. 2, No. 1729,

July 10, 1907, pp. 175-194,

figs. 32-47.

An account of the *Cyclopterus lumpus* is given.

The chief characteristics are noted of the family Cyclopterids, the genera indicated and figured, the characters and popular names recorded. The general habits, the oviposition and care of young by male parent, and the growth of young are detailed. Different views as to its economical value are compared.

GILL, THEODORE. Holothurian names.

Science (n. s.), xxvi, No. 658,
Aug. 9, 1907, pp. 185, 186.

Apropos of The Holothurians of the Hawaiian Islands, by Walter K. Fisher, it is shown that the first inclusion of holothurians, so called, in the genus *Holothuria* was published in the twelfth edition of the *Systema Naturae*. In the tenth edition only the Portuguese man-of-war and three species of Ascidians were included. The name *Holothuria* should be confined to the first and replace *Physalia*, while for the typical holothurians should be revived the name *Bohadschia* of Jäger and *Bohadschiidae* should be used as the family name.

— *Diemyctylus* or *Notophthalmus* as names of a salamander.

Science (n. s.), xxvi, No. 660,
Aug. 23, 1907, p. 256.

In his Herpetology of Japan and adjacent territory Dr. L. Stejneger adopted the name *Diemyctylus* and was unable to give the etymology. It is demonstrated that *Notophthalmus* should be used instead of *Diemyctylus* and the etymologies of the two names are given.

— Stone-gathering fishes.

Am. Naturalist, xli, No. 487,
July, 1907, pp. 468, 469.

An article on "Chubs' nests," by A. W. G. Wilson, is referred to and the evidence as to the species (*Semotilus corporalis* or *S. atromaculatus*) claimed to make the nests compared.

— The *Coracinus* of Josephus.

Palestine Expl. Fund. Quart.
Statement, Oct., 1907, p. 317.

The *Coracinus* is identified with a *Tilapia*.

— Systematic Zoology: Its progress and purpose.

Science (n. s.), xxvi, No. 668,
Oct. 18, 1907, pp. 489-505.

— The Millers-thumb and its habits.

Smithsonian Misc. Colls., LII,
Quar. Issue, Pt. 1, No. 1801,
June 18, 1908, pp. 101-116,
figs. 26-39.

An account of the *Cottus gobio* and related species is given with relation to (1) its systematic position, (2) the characteristics of the subfamily *Cottinae* and genus *Cottus*, the popular names, (3) specific and sexual distinctions, (4-5) habits in general, (6) sexual relations and

GILL, THEODORE—Continued.

propagation, (7) embryology and growth, and (8) uses and injuries. An appendix gives results of examination of 50 specimens with reference to numbers of rays. It is shown that there is variation in the number of ventral rays (3 or 4) and that the *Pegedictis utalops* (Rafinesque) was not a *Cottus*, but *Etheoctoma flabellare*.

HERRE, ALBERT CHRISTIAN. (See under David Starr Jordan.)

JORDAN, DAVID STARR, and DICKERSON, MARY CYNTHIA. Notes on a collection of fishes from the Gulf of Mexico, at Vera Cruz and Tampico.

Proc. U. S. Nat. Mus., xxxiv,
No. 1592, Apr. 6, 1908, pp.
11-22, figs. 1, 2.

Bairdiella verruc-crucis is described as new.

— Description of a new species of halfbeak, *Hemiramphus mioprorus*, from Nagasaki, Japan.

Proc. U. S. Nat. Mus., xxxiv,
No. 1602, Apr. 25, 1908, pp.
111-112, one fig.

— and HERRE, ALBERT CHRISTIAN. A review of the Cirrhitoid fishes of Japan.

Proc. U. S. Nat. Mus., xxxiii,
No. 1562, Oct. 23, 1907, pp.
157-167, figs. 1, 2.

One new genus, *Isobuna*, is described.

— and RICHARDSON, ROBERT EARL. On a collection of fishes from Echigo, Japan.

Proc. U. S. Nat. Mus., xxxiii,
No. 1570, Dec. 12, 1907, pp.
263-266, figs. 1-3.

Three new species, *Lefua echigonta*, *Pallasina cryngia*, and *Chloea nakamurac* are described.

— Description of a new species of killifish, *Lucania browni*, from a hot spring in Lower California.

Proc. U. S. Nat. Mus., xxxiii,
No. 1572, Dec. 24, 1907, pp.
319-321, 1 fig.

— A review of the flat-heads, gurnards, and other mail-cheeked fishes of the waters of Japan.

Proc. U. S. Nat. Mus., xxxiii,
No. 1581, Feb. 28, 1908, pp.
629-670, figs. 1-9.

JORDAN, DAVID STARR, and RICHARDSON, ROBERT EARL.—Continued.

Thirteen genera and 24 species are listed, of which the following are described as new: Genera, *Rogadius*, *Bambradon*, *Dactyloptena*, *Dalcocus*; species, *Hoplichthys gilberti*.

— and SEALE, ALVIN. List of fishes collected in the river at Buytenzorg, Java, by Dr. Douglas Houghton Campbell.

Proc. U. S. Nat. Mus., xxxiii, No. 1575, Dec. 24, 1907, pp. 535-543, figs. 1, 2.

Twenty-four species are listed, one of which, *Glossogobius campbellianus*, is described as new.

KENDALL, WILLIAM CONVERSE. Identity of a supposed whitefish, *Coregonus angusticeps*, Cuvier and Valenciennes, with a northern cyprinid, *Platygobio gracilis* (Richardson).

Smithsonian Misc. Colls., lxi, Quar. issue, pt. 1, No. 1800, May 27, 1908, pp. 95-99.

OGLE, FLETCHER. (See under C. H. Eigenmann.)

SEALE, ALVIN and BEAN, BARTON A. On a collection of fishes from the Philippine Islands, made by Maj. Edgar A. Mearns, surgeon, U. S. Army, with description of seven new species.

Proc. U. S. Nat. Mus., xxxiii, No. 1568, Nov. 21, 1907, pp. 229-248, figs. 1-8.

In this paper 132 species of fishes collected by Doctor Mearns at Zamboanga and vicinity are listed. The following are described as new: *Barbus quinquemaculatus*, *Mearnsella cincta*, *Rasbora punctulatus*, *Polydaetylus opercularis*, *Cephalopholis maculatus*, *Chorops zamboangae*, and *Callyodon latifasciatus*.

SNYDER, JOHN OTTERBEIN. Description of *Pantosteus santa-anae*, a new species from the Santa Ana River, Cal.

Proc. U. S. Nat. Mus., xxxiv, No. 1595, Apr. 6, 1908, pp. 33, 34.

MOLLUSKS.

BARTSCH, PAUL. New marine mollusks from the west coast of America.

Proc. U. S. Nat. Mus., xxxiii, No. 1564, Oct. 23, 1907, pp. 177-183.

This paper embraces diagnoses of new mollusks from the Oregonian faunal area belonging to the genera *Sella*, *Bittium*, *Cerithiopsis*, and *Metaxia*.

The following new species and subspecies are described: *Sella montereyensis*, *Bittium (Stylidium) eschrichti montereyensis*, *B. (S.) eschrichti icelum*, *B. caurienae multiflosum*, *B. tumidum*, *B. quadrifidum ingens*, *Cerithiopsis cosmia*, *C. pedroana*, *Metaxia diadema*.

— The west American mollusks of the genus *Triphoris*.

Proc. U. S. Nat. Mus., xxxiii, No. 1569, Dec. 12, 1907, pp. 249-262, one plate.

A monograph of the west American members of the genus: *Triphoris montereyensis*, *T. pedroana*, *T. callipyrgus*, *T. carpenteri*, *T. hemphilli*, *T. catalinaensis*, *T. stearnsi*, *T. peninsularis*, *T. excolpus*, *T. panamensis*, *T. dalli*, *T. galapagensis*, *T. chathamensis*, *T. adamsi*.

BARTSCH, PAUL. A new fresh-water bivalve (*Corneocyclas*) from the mountains of Ecuador.

Proc. U. S. Nat. Mus., xxxiii, No. 1584, Feb. 29, 1907, pp. 681, 682, figs. 1, 2.

Corneocyclas darisi.

— Notes on the fresh-water mollusk *Planorbis magnificus* and descriptions of two new forms of the same genus from the southern States.

Proc. U. S. Nat. Mus., xxxiii, No. 1587, Mar. 4, 1908, pp. 697-700, one plate.

Planorbis eucosmius, *P. eucosmius vaughani*.

— (See also under W. H. Dall.)

DALL, WILLIAM HEALEY. Descriptions of new species of shells, chiefly *Buccinidae*, from the dredgings of the U. S. S. Albatross during 1906, in the northwestern Pacific, Bering, Okhotsk, and Japanese seas.

Smithsonian Misc. Colls., L, Quar. issue, Pt. 2, No. 1727, July 9, 1907, pp. 139-173.

The following species were described as new, the types being in

DALL, WILLIAM HEALEY—Continued.

the National Museum: *Picurotomella simplicissima*; *Buccinum zolotes*, *B. opisoplectum*, *B. niponense*, *B. enismatum*, *B. diploctum*, *B. epistomium*, *B. sigmatopleura*, *B. pollum*, *B. oedematum*, *B. acutispiratum*, *B. surugoum*, *B. kadlakense*, *B. anticanum*, *B. sakhalinense*, *B. ectomocyma*, *B. bombycinum*, *B. limnoideum*, *B. simulatum*, *B. bullimuloidum*, *B. rossicum*, *B. pemphigus*, *B. orotundum*, *B. fucanum*, and *B. eugrammatum*; *Chrysodomus insularis* var. *constrictus*, *C. variciferus*, *C. parallelus*, *C. adelphicus*, *C. oncodes*, *C. culimatus*, *C. trochoides*, *C. (Ancistrolepis) damon*, *C. (A.) grammatus*; *Tritonofusus calamus*, *T. exychus*, *T. (Pileifusus) polypleuratus*, *T. (P.) clacodes*, *T. (P.) rhyssus*, *T. (P.) aurantius*, *T. (P.) croceus*, *T. (P.) kroyeri*, var.; *Mohnia micra*, *M. sordida*, *M. clarki*; *Volutopsius midendorffii* var. *emphaticus*, *V. kennicotti* var. *incisus*, *V. limatus*, *V. simplex*, *V. harpa* var. *dentus*; *Liomacrus bilstriatus*; *Boreotrophon elegans*; *Metula elongata*; *Galathea leucodoma*; *Astraea persica*; *Basilissa babilica*; *Microgaza fulgens*; *Cocculina japonica*; *Dentalium crocinum*; *Nucula mirifica*; *Pecten (Chlamys) erythrocomatus*; *Crenella grisea*; *C. diaphana*; *Modiolaria impressa*; *Liocyma antiana*; *Pholadomya pacifica*.

Certain new terms for indicating in a diagnosis the direction of sculpture, are also proposed, p. 141.

Linnaeus as a zoologist.

Proc. Wash. Acad. Sci., ix, July 31, 1907, pp. 272-274.

An address before the commemorative meeting of the academy in honor of the bicentennial of Linnaeus.

On the synonymic history of the genera, *Clava* Martyn, and *Cerithium* Bruguière.

Proc. Acad. Nat. Sci. Phila., Sept., 1907, pp. 363-369.

A discussion of the history of these generic names with the correction of a number of published errors.

Supplementary notes on Martyn's Universal Conchologist.

Proc. U. S. Nat. Mus., xxxiii, No. 1565, Oct. 23, 1907, pp. 185-192, one fig.

These notes give an account of the names proposed by Martyn in his

DALL, WILLIAM HEALEY—Continued.

third and fourth volumes, from a copy in the library of the Australian Museum at Sydney, and finally prove that the four parts of the work were issued in 1784, 1784, 1786, and 1787. It is also shown that the text of Chen's so-called reprint is inaccurate and not to be relied upon.

On a Cymatium new to the Californian fauna.

Nautilus, xxi, No. 8, Dec., 1907, pp. 85, 86.

Describes a specimen of a new variety, *tremperi*, of *Cymatium corrugatum* Lamarek, collected by Dr. R. H. Tremper near San Pedro, Cal., the species being previously known only as a member of the Mediterranean fauna.

Notes.

Nautilus, xxi, No. 8, Dec., 1907, pp. 90, 91.

These notes relate to *Planorbis magnificus* Pilsbry, which is blind when adult; to a reversed *Marginitella apicina* in the National Museum; and to discovery of *Ilyanassa obsoleta* Say, alive on oyster beds on the shores of San Francisco Bay, where *Ostrea virginica* had been "planted," doubtless imported from the East with "seed" oysters.

Memoranda of suggestions for the organization of an American Conchological association or society.

Nautilus, xxi, No. 8, Dec., 1907, pp. 94-96.

This is practically the report of a committee to consider the formation of such a society, appointed at the International Zoological Congress of 1907, by those members interested in the subject.

Note on *Gonidea angulata* Lea, a fresh-water bivalve, with description of a new variety.

Smithsonian Misc. Colls., L, Quar. issue, Pt. 4, No. 1784, Jan. 28, 1908, pp. 499, 500.

Describes the variety *haroldiana* Dall, from Santa Clara County, Cal.

A new species of *Cavolina*, with notes on other Pteropoda.

Smithsonian Misc. Colls., L, Quar. issue, Pt. 4, No. 1785, Jan. 28, 1908, pp. 501, 502.

Cavolina couthouyi Dall, from the South Pacific is described; the new name *Clio antarctica* is proposed for the preoccupied *C. australis* D'Orbigny, and notes are given on a number of other Pacific Pteropods.

DALL, WILLIAM HEALEY. Subdivisions of the Terebridae.

Nautilus, XXI, No. 11, Mar., 1908, pp. 124, 125.

A revision of the group based on the museum collection. The following new subdivisions are proposed: *Perirhoë* for *Terebra circumcincta* Deshayes; *Triplostephanus* for *Terebra triseriata* Gray; *Acuminata* for *Terebra lanceolata* Linnaeus; and *Duplicaria* for forms like *Terebra duplicata* Lamarck. A new technical term, "pervious," is proposed for the condition when the axis of a spiral gastropod is coiled about a central vacant space without separating it from the cavity of the whorls, in contradistinction to "perforate," which indicates an axial umbilicus completely separated from the cavity of the whorls.

Note on *Turbonilla castanea* and *Odostomia montereyensis*.

Nautilus, XXI, No. 11, Mar., 1908, p. 131.

These names, given by Dall and Bartsch in a recent paper (*Proc. U. S. Nat. Mus.*, No. 1574), having proved to be preoccupied, the names *T. (P.) castanella* and *O. (A.) canfieldi* are proposed as substitutes.

Some new Californian shells.

Nautilus, XXI, No. 12, Apr., 1908, pp. 136, 137.

Rissoa (Alcanta) grippiana and *Bela grippi* are described as new from specimens in the U. S. National Museum.

A revision of the Solenomyidae.

Nautilus, XXII, No. 1, May, 1908, pp. 1, 2.

A revision of the group showing that it comprises several subdivisions, namely, subgenus *Solenya* Lamarck, with three sections; new subgenus *Petrasma* Dall, with three sections; and new subgenus *Acharax* Dall, with one section. The specimens studied are in the National Museum.

Doctor Montgomery's proposed amendment to the rules of nomenclature.

Science (n. s.), XXVI, No. 656, July, 26, 1907, p. 117.

The Antarctic expedition of the Discovery under Capt. Scott, R. N., 1901-1904.

Science (n. s.), XXVI, No. 661, Aug. 30, 1907, pp. 283-285.

Review of Vols. II and III, on Zoology and Botany.

DALL, WILLIAM HEALEY. Resultats du Voyage du S. Y. Belgica, en 1897-1899, sous le commandement de A. de Gerlache de Gomery: Zoologie.

Science (n. s.), XXVI, No. 672, Nov. 15, 1907, pp. 660, 661.

Review of reports on the zoology of the Belgian antarctic expedition. For the preoccupied medusa-name *Isonema*, the new name *Arctapodema* is proposed by the reviewer.

National Antarctic Expedition, 1901-1904, S. S. Discovery, commanded by Captain Scott, R. N., Natural History, Vol. I, Geology.

Science (n. s.), XXVI, No. 672, Nov. 15, 1907, pp. 661, 662.

A review of the geological results of the expedition.

Some notes on malacological nomenclature.

Science (n. s.), XXXVII, No. 699, May 22, 1908, pp. 827, 828.

A discussion of some nomenclatorial questions raised by Dr. H. von Ihering.

Descriptions of new species of mollusks from the Pacific coast of the United States, with notes on other mollusks from the same region.

Proc. U. S. Nat. Mus., XXXIV, No. 1610, June 16, 1908, pp. 245-257.

The following new forms are described: *Chistaxis polystigma*, *Turris (Antiplanes) diadema*, *T. (Surcula) haleynia*, *Acanthina lapiloides* variety *aurantia*, *Tritonofusus (Plicifusus) kelseyi*, *Borcotrophon bentleyi*, *Anachis petravis*, *Opalia (Dentiscala) mazatlanica*, *O. (D.) mexicana*, *Epitonium (Crisposcala) acrostephanus*, *E. (C.) catalinae*, *Eulima lomana*, *Odostomia (Eulea) atossa*, *Trichotropis? kelseyi*, *Phasianella compta* variety *producta*, *Fissurella volcano* variety *crucifera*, *Yoldia cusifera* variety *plena*.

The following new names are substitutes for names which are found to be preoccupied: for *Pleurotoma inermis* Hinds, the specific name *Ophioderma*; for *P. cancellata* Carpenter, the name *rhines*; for *Columbella (Anachis) minima* Arnold, the name *arnoldi*; for *Eulithidium variegatum* Carpenter, the name *typicum*; for *Phasianella punctata* Carpenter, the name *carpenteri*.

The material upon which this paper is based is in the National Museum.

DALL, WILLIAM HEALEY, and BARTSCH, PAUL. The Pyramidellid mollusks of the Oregonian faunal area.

Proc. U. S. Nat. Mus., xxxiii, No. 1574, Dec. 31, 1907, pp. 491-534, pls. XLIV-XLVIII.

This is a general revision of the local group from material chiefly in the National Museum. The following new species are described and figured: *Turbonilla* (*Turbonilla*) *gilli* and subspecies *delmontensis*, (*T. Chemnitzia*) *montereyensis*, *T. (C.) muricatoides*, *T. (Strioturbonilla) serrae*, *T. (Pyrgolamprus) taylora*, *T. (P.) berryi*, *T. (P.) lyalli*, *T. (P.) victoriana*, *T. (P.) valdezi*, *T. (P.) newcombei*, *T. (P.) oregonensis*, *T. (Pyrgiscus) canfieldi*, *T. (P.) morehi*, *T. (P.) antestriata*, *T. (P.) eucosmobasis*, *T. (P.) castanea* (preoccupied name, later changed to *T. castanella*), *T. (Mormula) eschscholtzi*; *Odostomia* (*Chrysallida*) *cooperi*, *O. (C.) stricta*, *O. (C.) montereyensis*, *O.*

DALL, WILLIAM HEALEY, and BARTSCH, PAUL.—Continued.

(*C.*) *oregonensis*, *O. (Iridia) narisa*, *O. (I.) narisa delmontensis*, *O. (Iolaea) amianta*, *O. (Menestho) pharida*, *O. (M.) harfordensis*, *O. (M.) exura*, *O. (Eralca) tillamookensis*, *O. (E.) angularis*, *O. (E.) jeffetti*, *O. (E.) columbiana*, *O. (E.) deliciosa*, *O. (E.) tacomaensis*, *O. (E.) valdezi*, *O. (E.) phanea*, *O. (Amaura) kennerleyi*, *O. (A.) montereyensis* (previously used and later replaced by *O. (A.) canfieldi*).

The following previously described but unfigured species are figured: *Turbonilla rancourerei* Baird, *T. Styliua* Carpenter, *T. lordi* E. A. Smith, *T. tridentata* Carpenter, *T. tenuicula* Gould, *T. aurantia* Carpenter; *Odostomia tenuisculpta* Carpenter, *O. inflata* Carpenter, *O. areolana* Carpenter, *O. nuciformis* Carpenter, *O. gouldii*, *O. saturata* Carpenter.

INSECTS.

BARBER, H. S. Notes on *Omomyia hirsuta* Coquillett.

Proc. Ent. Soc. Wash., ix, Apr., 1908, pp. 28, 29.

—The glow-worm *Astraptor*.

Proc. Ent. Soc. Wash., ix, Apr., 1908, pp. 41-43, pl. 1.

BUSCK, AUGUST. New genera and species of American microlepidoptera.

Journ. N. Y. Ent. Soc., xv, No. 3, Sept., 1907, pp. 134-140.

Two new genera and nine new species from the United States are described.

—Descriptions of three new Tortricidae from Mexico.

Journ. N. Y. Ent. Soc., xv, No. 4, Dec., 1907, pp. 235, 236.

—Descriptions of North American Tineina.

Proc. Ent. Soc. Wash., ix, Apr., 1908, pp. 85-95.

Sixteen new species.

—Report on a trip for the purpose of studying the mosquito fauna of Panama.

Smithsonian Misc. Colls., LII, Quar. issue, No. 1795, May 1, 1908, pp. 49-77.

Notes on the habits of the various species taken.

BUSCK, AUGUST. New microlepidoptera from Pennsylvania.

Can. Ent., xl, No. 6, June, 1908, pp. 193-196.

Seven new species are described.

CAUDELL, A. N. Kirby's catalogue of Orthoptera.

Can. Ent., xxxix, No. 8, Aug., 1907, pp. 287-292.

Additions and corrections.

—An insect ventriloquist.

Ent. News, xviii, No. 8, Oct., 1907, pp. 335, 336.

On the song of *Cyphoderris piperi*.

—On some Forficulidae of the United States and the West Indies.

Journ. N. Y. Ent. Soc., xv, No. 3, Sept., 1907, pp. 166-170.

Description of two new species and notes on a number of described forms.

—Notes on United States Orthoptera, with the description of one new species.

Proc. Ent. Soc. Wash., viii, Nos. 3, 4, 1907, pp. 133-135.

A number of new records in Orthoptera.

- CAUDELL, A. N. On some earwigs (Forficulidae) collected in Guatemala by Messrs. Schwarz and Barber.
- Proc. U. S. Nat. Mus.*, xxxiii, No. 1563, Oct. 23, 1907, pp. 169-176.
- A number of new species and a new genus are described.
- A new *Barytettix* from Arizona.
- Proc. Ent. Soc. Wash.*, ix, Apr., 1908, pp. 69-71.
- Barytettix borcallis* described.
- Notes on some western Orthoptera; with the description of one new species.
- Proc. U. S. Nat. Mus.*, xxxiv, No. 1599, Apr. 17, 1908, pp. 71-81.
- Report on a collection of Orthoptera made on the Pacific coast.
- COQUILLETT, D. W. Notes and descriptions of Hippoboscidae and Streblidae.
- Ent. News*, xviii, No. 7, July, 1907, pp. 290-292, one fig.
- Describes one new genus and two new species, with notes on four additional species.
- New genera and species of Diptera.
- Proc. Ent. Soc. Wash.*, ix, Apr., 1908, pp. 144-148.
- Describes three new genera and nine new species.
- CRAWFORD, J. C. New North American Hymenoptera.
- Journ. N. Y. Ent. Soc.*, xv, No. 4, Dec., 1907, pp. 177-183.
- Five new genera and nine new species, mostly parasitic, are described.
- Notes on some species of the genus *Haliictus*.
- Journ. N. Y. Ent. Soc.*, xv, No. 4, Dec., 1907, pp. 183-189.
- Tables of the black species with the description of one new species in the National Museum.
- A new genus and species of Eupelmidae.
- Proc. Ent. Soc. Wash.*, ix, Apr., 1908, pp. 156, 157.
- One new genus and one new species from the West Indies are described.
- Some new Chalcidoidea.
- Proc. Ent. Soc. Wash.*, ix, Apr., 1908, pp. 157-160.
- One new genus and six new species are described.
- DYAR, H. G. The life histories of the New York slug-caterpillars, xix.
- Journ. N. Y. Ent. Soc.*, xv, No. 4, Dec., 1907, pp. 219-226, pl. ii.
- One species.
- New American Lepidoptera.
- Journ. N. Y. Ent. Soc.*, xv, No. 4, Dec., 1907, pp. 226-234.
- One new genus and 18 new species are described, and notes given on other species.
- The identity of *Brephos californicus* and *B. melanis*.
- Can. Ent.*, xxxix, No. 12, Dec., 1907, p. 411.
- Descriptions of some new species of American Noctuidae.
- Can. Ent.*, xl, No. 3, Mar., 1908, pp. 77-80.
- The geometrid genus *Racheospila*.
- Can. Ent.*, xl, No. 5, May, 1908, p. 171.
- Life histories of North American Geometridae, LXVIII.
- Psyche*, xiv, No. 5, Oct., 1907, pp. 92-94.
- Notes on some species of Notodontidae in the collection of the U. S. National Museum, with descriptions of new genera and species.
- Proc. Ent. Soc. Wash.*, ix, Apr., 1908, pp. 45-69.
- Five new genera and 32 new species are described.
- A pyralid inhabiting the fur of the living sloth.
- Proc. Ent. Soc. Wash.*, ix, Apr., 1908, pp. 142-144, fig. 9.
- One new genus, one new species.
- and KNAB, F. Descriptions of three new North American mosquitoes.
- Journ. N. Y. Ent. Soc.*, xv, No. 4, Dec., 1907, pp. 213, 214.
- Descriptions of new mosquitoes from the Canal Zone.
- Journ. N. Y. Ent. Soc.*, xv, No. 4, Dec., 1907, pp. 197-212.
- Describes 31 new species.
- HEIDEMANN, OTTO. Notes on *Heidemanna cixiformis* Uhler and other species of Isometopinae.
- Proc. Ent. Soc. Wash.*, ix, Apr., 1908, pp. 126-130, fig. 7.
- Describes 3 new species.

HOWARD, L. O. New genera and species of Apelininae, with a revised table of the genera.

U. S. Dept. Agr., Bur. Ent., Technical Series, No. 12, Pt. 4, July 12, 1907, pp. 60-88, figs. 13-22.

Descriptions of 5 new genera and 20 new species.

— A chalcidid parasite of the tick.
Ent. News, xviii, No. 9, Nov., 1907, pp. 375-378, pl. xiv, 1 fig.

Description of *Ixodiphagus*, new genus, *texanus*, new species, and an account of the evidence connected with the rearing of this form from *Haemaphysalis leporis-palustris* on rabbits in Texas.

— A suggestion regarding development retarded by parasitism.

Can. Ent., xl, No. 1, Jan., 1908, pp. 34, 35.

KNAB, FREDERICK. Mosquitoes as flower visitors.

Journ. N. Y. Ent. Soc., xv, No. 4, Dec., 1907, pp. 215-219.

A summary of all records of mosquitoes as flower visitors.

KNAB, FREDERICK. Culicid characters.
Can. Ent., xxxix, No. 10, Oct., 1907, pp. 349-353.

Discussion of the characters used in classification.

— Color varieties of Locustidae.
Science (n. s.), xxvi, No. 670, Nov., 1907, pp. 595-597.

Treats of red varieties of green forms.

— Observations on the mosquitoes of Saskatchewan.

Smithsonian Misc. Colls., L, Quar. Issue, pt. 4, No. 1787, Feb. 20, 1908, pp. 540-547.

Notes on the species taken by the author.

— A new genus and species of subethid mosquito.

Journ. N. Y. Ent. Soc., xv, No. 3, Sept., 1907, pp. 120, 121.

— Deinocerites again.

Journ. N. Y. Ent. Soc., xv, No. 3, Sept., 1907, pp. 121-123.

— (See also under H. G. Dyar.)

CRUSTACEANS.

ANDREWS, E. A. The young of the crayfishes *Astacus* and *Cambarus*.

Smithsonian Contributions to Knowledge, part of Vol. xxxv, No. 1718, Oct. 3, 1907, pp. 1-79, pls. 1-x.

Describes the young of *Astacus leniusculus* from Oregon and *Cambarus affinis* from Maryland. Determines the form and habits of the first, second, and third larval stages; gives the first detailed account of the appendages of the first and second stages; describes the hitherto unknown nature of successive mechanical attachments of the offspring to the parent.

BRADLEY, J. CHESTER. Notes on two amphipods of the genus *Corophium* from the Pacific coast.

Univ. Cal. Pub. Zool., iv, No. 4, May 15, 1908, pp. 227-252, pls. 9-13.

Describes and figures in detail *Corophium spinicorne* and *C. salmonis* Stimpson, both of which were before incompletely defined, and shows their relationships by a key to all the species of the genus. About 600 specimens of *C. salmonis*

BRADLEY, J. CHESTER—Continued.

were examined from the stomachs of young salmon from Karluk, Alaska, collected by the U. S. Bureau of Fisheries.

CUSHMAN, JOSEPH A. Fresh-water crustacea from Labrador and Newfoundland.

Proc. U. S. Nat. Mus., xxxiii, No. 1589, Mar. 4, 1908, pp. 705-713, pls. LVIII-LXII.

The material upon which the paper is based was collected near the eastern coast of Labrador (Dr. Glover M. Allen, collector) and at Funk Island, Newfoundland (Mr. Owen Bryant, collector). It comprises one species of Ostracoda, which is new, seven species of Cladocera, and one of Copepoda. The author points out the similarity between this fauna and that of northern Europe.

ORTMANN, ARNOLD E. Schizopod crustaceans in the U. S. National Museum: Schizopods from Alaska.

Proc. U. S. Nat. Mus., xxxiv, No. 1591, Apr. 6, 1908, pp. 1-10, 1 plate.

ORTMANN, ARNOLD E.—Continued.

Treats of the Schizopoda collected during the Alaska salmon investigations by the Bureau of Fisheries in 1903. Describes three species, two of which are new, one representing a new genus, *Holmestella*, to include which the definition of the subfamily Leptomysinae is altered.

PEARSE, ARTHUR S. Descriptions of four new species of amphipodous crustacea from the Gulf of Mexico.

Proc. U. S. Nat. Mus., xxxiv, No. 1594, Apr. 6, 1908, pp. 27-32, figs. 1-4.

Represents a partial study of the National Museum collection of Amphipods from the Gulf of Mexico. The types of two of the species were dredged by the U. S. Fisheries steamer Fish Hawk, another was taken at Cameron, La., under the auspices of the Gulf Biologic Station, while the fourth is from Oyster Bay, Fla., collected by Henry Hemphill.

PILSBRY, HENRY A. The Barnacles (Cirripedia) contained in the collections of the U. S. National Museum [by Henry A. Pilsbry] Special Curator of the Department of Mollusca, Academy of Natural Sciences of Philadelphia [Seal] Washington Government Printing Office 1907.

Bull. U. S. Nat. Mus., No. 60, Nov. 8, 1907, pp. 1-x, 1-122, pls. 1-xi, figs. 1-36.

Deals with the pedunculate cirripedes and the sessile family Verrucidae. All species represented in the National Museum are mentioned or described, and all known species of the United States and adjacent waters are treated monographically and included in the keys to species. Of the Pedunculata there are in the National Museum 73 species (37 new), 10 subspecies (all new), contained in 11 genera (1 new), 11 sections or subgenera (3 new), and 2 subfamilies of the Lepadidae. Of the Verrucidae there are 5 species (4 new) and one new subspecies, all belonging to the genus Verruca.

RATHBUN, MARY J. Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from August, 1899, to March, 1900. Commander Jefferson F. Moser, U. S. Navy, commanding. IX.

RATHBUN, MARY J.—Continued.

Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieutenant-Commander L. M. Garrett, U. S. Navy, commanding. X.

The Brachyura.

Memoirs Mus. Comp. Zool., xxxv, No. 2, Aug., 1907, pp. 21-74, pls. 1-9.

One hundred and thirty-six species are recorded, 18 of which are new, one representing a new genus.

—South American crustacea.

Revista Chilena de Historia Natural, Santiago de Chile, año xi, Núm. 1, February 28, 1907, pp. 45-50, pls. 11, 111, text fig. 1.

A list of seven species of stalk-eyed crustacea, specimens of which were sent by Prof. Charles E. Porter to the United States National Museum for determination. A new crab, *Plintzia valdiviensis*, and a new shrimp, *Hippolytina porteri*, are described, while a new name, *Galathea lenzi*, is given to *Galathea latrostris* Lenz, not Dana. The types were destroyed by the earthquake at Valparaiso, but cotypes are in the United States National Museum.

—(See also under William Stimpson.)

RICHARDSON, HARRIET. Terrestrial isopods of the family Eubelidae, collected in Liberia by Dr. O. F. Cook.

Smithsonian Misc. Colls., 1, Quar. issue, Pt. 2, No. 1733, Sept. 12, 1907, pp. 219-247, figs. 50-116.

The specimens were collected under the auspices of the New York State Colonization Society by Dr. O. F. Cook and others, chiefly at Mount Coffee. One new genus and 12 new species (referable to four genera) are described. The types belong to Doctor Cook; some cotypes are in the U. S. National Museum.

—On some isopods of the family Dajidae from the northwest Pacific Ocean, with descriptions of a new genus and two new species.

Proc. U. S. Nat. Mus., xxxiii, No. 1586, Feb. 29, 1908, pp. 689-696, figs. 1-7.

RICHARDSON, HARRIET—Continued.

In this paper, despite its title, are described a new genus and three new species of Dajidae. Two of the species come from Berling Island, while the type-locality of *Holophryxus californiensis* is in southeastern Alaska, a cotype from Santa Barbara Channel furnishing the specific name. Two of the species are parasitic on Macrura, the other on a Schizopod.

RICHARDSON, HARRIET. The parasitic isopod *Leidyia distorta* (Leidy) found on a new host.

Proc. U. S. Nat. Mus., XXXIV, No. 1593, Apr. 6, 1908, pp. 23-26, figs. 1-5.

Describes specimens of *Leidyia distorta* from Bermuda parasitic on *Pachygrapsus transversus* (Gibbes).

— Description of a new isopod of the genus *Eurycope* from Marthas Vineyard.

Proc. U. S. Nat. Mus., XXXIV, No. 1598, Apr. 17, 1908, pp. 67-69, figs. 1-3.

Eurycope truncata, described from deep water off Marthas Vineyard and off Georges Bank.

STEBBING, THOMAS R. R. A new amphipod crustacean, *Orchestoidea biolleyi*, from Costa Rica.

Proc. U. S. Nat. Mus., XXXIV, No. 1609, May 15, 1908, pp. 241-244, pl. xii, figs. 1, 2.

Based on specimens collected at Punta Arenas by Prof. P. Biolley. Discusses also the Costa Rican *Hyaella faxoni* Stebbing and its allies, and corrects the definition of the family Talitridae in "Das Tierreich."

STIMPSON, WILLIAM. Report on the crustacea (Brachyura and Anomura) collected by the North Pacific Exploring Expedition, 1853-1856.

Smithsonian Misc. Coll., XLIX, No. 1717, Sept. 7, 1907, pp. 1-240, pls. i-xxvi.

A posthumous publication of a report prepared by Doctor Stimpson for the Navy Department prior to 1871. Brief preliminary descriptions of all the genera and species had been published in the Proceedings of the Academy of Natural Sciences of Philadelphia. A few species are missing from the 358 originally

STIMPSON, WILLIAM—Continued.

described. The introductory note and the explanatory footnotes are supplied by Miss Mary J. Rathbun.

VERRILL, A. E. Decapod crustacea of Bermuda; I. Brachyura and Anomura. Their distribution, variations, and habits.

Trans. Conn. Acad. Arts and Sciences, XIII, Jan.-Apr. 1908, pp. 899-474, pls. ix-xxviii.

Reprinted as a separate, Apr., 1908.

Two species and 4 varieties are described as new.

WILSON, CHARLES BRANCH. North American Parasitic Copepods belonging to the family Caligidae. Parts 3 and 4. A revision of the Pandarinae and the Cecropinae.

Proc. U. S. Nat. Mus., XXXIII, No. 1573, Dec. 31, 1907, pp. 323-490, pls. xvii-xliii, figs. 1-18.

The sixth paper in the series based upon the parasitic copepods in the U. S. National Museum. It is a careful revision of the two families named. Twenty species are described, of which one is new to science. The males of eight other species are definitely located, four of them being new to science. The difficult genus *Nogaus* is analyzed and its component parts referred to their proper genera. A complete life history is presented by using different stages of development from different genera.

— North American parasitic copepods: new genera and species of Caliginae.

Proc. U. S. Nat. Mus., XXXIII, No. 1580, Feb. 28, 1908, pp. 593-627, pls. xlix-lvi.

Based on work carried on in 1903 at the laboratory of the Bureau of Fisheries at Beaufort, N. C. Five new and two previously known species of Caliginae are described, two new species forming types of new genera. At the end of the paper is given an alphabetical list of fishes of Beaufort which were hosts of parasitic copepods, with the names of the latter, many of which are still to be described.

ECHINODERMS.

AGASSIZ, ALEXANDER, and CLARK, HUBERT LYMAN. Preliminary report on the Echini collected in 1906, from May to December, among the Aleutian Islands, in Bering Sea, and along the coast of Kamchatka, Saghalin, Korea, and Japan, by the U. S. Fish Commission steamer Albatross, Lieut.-Commander L. M. Garrett, U. S. Navy, commanding.

Bull. Mus. Comp. Zool., LI, No. 5, Oct., 1907, pp. 109-139.

Seventy-one species are enumerated, belonging to 42 genera; 20 species are described as new.

CLARK, AUSTIN HOBART. Descriptions of new species of recent unstalked crinoids from the North Pacific Ocean.

Proc. U. S. Nat. Mus., XXXIII, No. 1559, Sept. 17, 1907, pp. 69-84.

Based on material collected by the United States Fisheries steamer Albatross in the Pacific Ocean north of Mexico and southern Japan. A key is given to the species described in the paper. One new species of *Decametrocrinus* and 20 new species of *Antedon* are described. The latter belong to the *Elegans*, *Eschrichtii*, and *Tenella* groups of the genus *Antedon*.

— Descriptions of new species of recent unstalked crinoids from the coasts of northeastern Asia.

Proc. U. S. Nat. Mus., XXXII, No. 1561, Sept. 17, 1907, pp. 127-156.

Here are described 30 new species of *Antedon* and three new species of *Comatula*, while new names are given to a *Comatula* and an *Atelecrinus*. A key is given to the species in the paper; those of the genus *Antedon* belong to the *Acæla*, *Multicolor*, *Basiscirra*, *Sphnifera*, *Palmata*, and *Elegans* groups.

— Five new recent crinoids from the North Pacific Ocean.

Smithsonian Misc. Colls., L, Quar. Issue, pt. 3, No. 1777, Oct. 29, 1907, pp. 337-342, 1 fig.

The new species belong to the genera *Bathycrinus* (1), *Zygometra* (2), and *Antedon* (3). They were

CLARK, AUSTIN HOBART—Continued.

collected in southern Japan and Kamchatka by the United States Fisheries steamer Albatross in 1900.

— New genera of recent free crinoids.

Smithsonian Misc. Colls., L, Quar. Issue, pt. 3, No. 1778, Oct. 29, 1907, pp. 343-364.

Divides the genus *Antedon* de Fremyville, 1811, into 18 genera, all of which are new with the exception of *Antedon* itself. The known species are distributed as follows: to *Zygometra* 6, *Nanometra* 4, *Tropometra* 4, *Helicometra* 19, *Thysanometra* 1, *Antedon* 36, *Psathyrometra* 3, *Zenometra* 1, *Pontometra* 1, *Himcrometra* 52, *Cyllometra* 7, *Pterometra* 2, *Ptilometra* 4, *Thalassometra* 23, *Charitometra* 19, *Pacilometra* 2, *Calometra* 9, *Adelometra* 1.

— Notice of some crinoids in the collection of the Museum of Comparative Zoology.

Bull. Mus. Comp. Zool., LI, No. 8, Jan., 1908, pp. 233-248, pls. I, II.

Ten species are recorded, eight of which are new. Keys to the species of *Bathycrinus* and to the genera of the Antedonidae are given; also a note on the 6-rayed specimens of *Tropometra carinata* (Lamarck). The four species described from specimens collected by the U. S. Fisheries steamer Albatross are in the collection of the U. S. National Museum.

— Infrabasals in recent genera of the crinoid family Pentacrinidae.

Proc. U. S. Nat. Mus., XXXIII, No. 1582, Feb. 29, 1908, pp. 671-676, figs. 1-8.

Demonstrates the presence of infrabasals in *Isocrinus decorus*, *Metacrinus rotundus* and *M. superbus*.

— The crinoid genus *Comatula* Lamarck; with a note on the *Enocrinus parrae* of Guérin.

Proc. U. S. Nat. Mus., XXXIII, No. 1585, Feb. 29, 1908, pp. 683-688.

Divides the original genus *Comatula* into two parts—*Comatula* Lamarck 1816 restricted (type *C. solaris* Lamarck 1816) with seven

CLARK, AUSTIN HOBART—Continued.

species, and *Comaster* L. Agassiz 1836 (type *C. multiradiata* Linnaeus 1758) with 44 species. The author shows that *Enerinus parrae* of Guérin 1835 is the same as *Pentacrinus mülleri* Örsted, which should therefore be known as *Iso-crinus parrae* (Guérin).

—The stalked crinoids of the Siboga Expedition.

American Naturalist, XLII, No. 495, Mar., 1908, pp. 203-206.

A review of a monograph by Dr. L. Döderlein on the recent stalked crinoids of the East Indies, based on the collections made by the "Siboga" Expedition, and containing the announcement of the discovery of the infrabasals in a species of *Metacrinus*.

—New genera of unstalked crinoids.

Proc. Biol. Soc. Washington, XXI, Apr. 11, 1908, pp. 125-136.

Thirteen new genera of Comatulida are described, while the new name *Pentametrocrinidae* is given to the family containing *Pentametrocrinus* and *Decametrocrinus*. The paper concludes with a systematic list of the families and genera of Comatulida.

—New stalked crinoids from the eastern coast of North America.

Proc. U. S. Nat. Mus., XXXIV, No. 1607, May 4, 1908, pp. 205-208, figs. 1-3.

Two new species are described—*Bathycrinus serratus* and *Rhizocrinus verrilli*—the types of which were collected by the U. S. Fish Commission and were recently returned to the U. S. National Museum by Prof. A. E. Verrill.

—Descriptions of new species of crinoids, chiefly from the collections made by the U. S. Fisheries steamer Albatross at the Hawaiian Islands in 1902; with remarks on the classification of the Comatulida.

Proc. U. S. Nat. Mus., XXXIV, No. 1608, May 14, 1908, pp. 209-239.

Gives a key to the 11 recent families of Comatulida, and their geographical and bathymetrical range; also a table of distribution for the 29 genera, and a key to the 12 Ha-

CLARK, AUSTIN HOBART—Continued.

wallan species of which 11 are described as new. Thirteen other new species are described from various parts of the Atlantic and Pacific oceans.

—Two new crinoid genera.

Proc. Biol. Soc. Washington, XXI, June 9, 1908, pp. 149-152.

Subdivides the genus *Isoocrinus* on characters of arm structure, erecting two new genera. *Endorocrinus*, type *E. parrae* (Guérin), and *Hypalocrinus*, type *H. norestanus*, P. H. Carpenter.

—Some cases of abnormal arm structure in recent crinoids.

Proc. U. S. Nat. Mus., XXXIV, No. 1612, June 16, 1908, pp. 265-270, figs. 1-5.

Records instances of abnormal arm structure in *Rhizocrinus lofo-tensis*, *Proclomatra acula*, *Himerometra stylifer*, *Charitometra imbricata*, *Heliometra tanneri* and *H. maxima*.

—The crinoid genus *Eudocrinus*, with description of a new species.

Proc. U. S. Nat. Mus., XXXIV, No. 1613, June 20, 1908, pp. 271-279, figs. 1-11.

Discusses the structure of the various species previously included in *Eudocrinus* and demonstrates their position in two families, *Zygometridae* and *Pentametrocrinidae*. The genera *Eudocrinus* and *Pentametrocrinus* are defined, and a new species of *Eudocrinus* is described.

CLARK, HUBERT LYMAN. The Cladariae.

Bull. Mus. Comp. Zool., LI, No. 7, Dec., 1907, pp. 165-230, pls. 1-11.

Gives a history of the classification of the Cladariae. Recognizes 21 genera and 60 recent species; two genera and three species are described as new.

—The Apodous Holothurians. A monograph of the Synaptidae and Molpadidae, including a report on the representatives of these families in the collections of the U. S. National Museum.

Smithsonian Contributions to Knowledge, part of vol. XXXV, No. 1723, Jan. 21, 1908, pp. 1-231, pls. I-XIII.

CLARK, HUBERT LYMAN—Continued.

Discusses the history of the classification of the two families involved, gives an annotated catalogue of the specimens in the U. S. National Museum, and describes the structure, physiology, development, habits, and classification of the two families and of each species of the same, so far as known.

Eight new species and two new genera are described.

(See also under Alexander Agassiz.)

EDWARDS, CHARLES LINCOLN. The Holothurians of the North Pacific coast of North America collected by the Albatross in 1903.

Proc. U. S. Nat. Mus., xxxiii, No. 1558, Sept. 14, 1907, pp. 49-68, figs. 1-12.

Based on Holothurians collected by the United States Fisheries steamer Albatross during the Alaska salmon investigations in 1903. Eleven species are discussed, of which one is a new form.

WORMS, COELENTERATES, ETC.

BAGG, RUFUS MATHER, JR. Foraminifera collected near the Hawaiian Islands by the U. S. Bureau of Fisheries steamer Albatross in 1902.

Proc. U. S. Nat. Mus., xxxiv, No. 1603, Apr. 28, 1908, pp. 113-172, pl. v.

The greater part of the bottom samples taken by the U. S. Bureau of Fisheries steamer Albatross near the Hawaiian Islands in 1902 was destroyed by fire; the remainder forms the basis of this report. There are enumerated 206 species, subspecies, and varieties belonging to 54 genera; of these 5 species and 2 subspecies are described as new.

BUSH, KATHERINE JEANNETTE. Tubicolous annelids of the tribes Sabellides and Serpulides from the Pacific Ocean.

Harriman Alaska Expedition, xii, 1905, pp. 167-346, pls. xxi-xliv.

The introduction gives a brief account of Pacific annelids with a list of species previously recorded, also lists of families, known genera, new genera, and species new to the region, which are represented in the Harriman collection. The systematic discussion deals with the

FISHER, WALTER K. Necessary changes in the nomenclature of starfishes.

Smithsonian Misc. Colls., LII, Quar. Issue, Pt. 1, No. 1799, May 27, 1908, pp. 87-93.

Gives a list of names of genera of starfishes in current use, most of which should be changed. Discusses 12 of them in detail. Proposes four new names: *Lysasterias* for *Anasterias perrieri* Studer; *Lactmaster* for *Ctenaster spectabilis* Perrier; *Diplodontias* for *Goniodon* Perrier; and *Parasterina* for *Patiria crassa* Gray.

SPEBBY, W. L. Notes on Metacrinus.

Fourth Report Mich. Acad. Sci., 1904, pp. 195-199, 2 charts in text.

Based on a study of specimens dredged by the United States Fisheries steamer Albatross in Suruga Gulf, Honshu Island, Japan, 1900, and assigned to Dr. H. L. Clark, for study. Discusses the interrelations and variations in *M. rotundus* and *M. interruptus*.

BUSH, KATHERINE JEANNETTE—Cont'd. tribes Sabellides and Serpulides. Analytical tables for the genera are given, and 15 new genera and 43 new species are described from the Pacific. The genus *Spirorbis* is extensively dealt with, an annotated list of known species is given, and notes on many known species with descriptions of four new Atlantic forms.

Based partly on material collected by the U. S. Fish Commission in the Atlantic.

(See also under J. Percy Moore.)

CLARK, HUBERT LYMAN. A new host for Myzostomes.

Zool. Anz., xxv, No. 682, Sept. 20, 1902, pp. 670, 671.

Notes the occurrence of Myzostomes on specimens of an ophiuran, *Astroceras pergamena* Lyman, collected by the U. S. Bureau of Fisheries steamer Albatross off the coast of Japan in 1900, although these parasites have hitherto been found only on Crinoids.

CLARKE, SAMUEL F. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S.

CLARKE, SAMUEL F.—Continued.

Fish Commission steamer Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. Navy, commanding.

VIII. The Hydroids.

Memoirs Mus. Comp. Zool., xxxv, No. 1, Feb., 1907, pp. 1-18, pls. 1-15.

Only 12 species are noted, indicating a scarcity of hydroid life in the region covered. Six species are new, one from the unusual depth of 2,845 fathoms. Two species were previously known from the Atlantic side of the Isthmus.

GOLDBERGER, JOSEPH. (See under C. W. Stiles.)

HASSALL, A. (See under C. W. Stiles.)

MOORE, J. PERCY, and BUSCH (BUSH), KATHERINE J. Sabellidae and Serpulidae from Japan, with descriptions of new species of Spiroboris.

Proc. Acad. Nat. Sci. Phila., Jan., 1904 (issued March 18, 1904), pp. 157-179, pls. xi, xii.

Based on specimens collected by the U. S. Bureau of Fisheries steamer Albatross in Japan, 1900. Fifteen species are noted, of which 13 are described as new. Miss Bush contributed descriptions of the Spiroboris, which are four in number.

RANSOM, B. H. Notes on parasitic nematodes, including descriptions of new genera and species, and observations on life histories.

Circ. 116, Bureau Animal Industry, U. S. Dept. Agric., Oct. 4, 1907.

— Occurrence of the cysticercus of *Taenia solium* in sheep.

Science (n. s.), xxvii, No. 703, June 19, 1908, pp. 950, 951.

Only a few cases of the occurrence of the intermediate stage of the armed tapeworm of man in sheep have been reported, and the case cited in this article is the first American case to be placed on record. The specimens are in the helminthological collections of the Bureau of Animal Industry.

SCHULZE, FRANZ EILHARD. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U. S. Fish Commission steamer

SCHULZE, FRANZ EILHARD—Continued.
Albatross, from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U. S. Navy, commanding.
XI. Die Xenophyophoren.

Bull. Mus. Comp. Zool., li, No. 6, Nov., 1907, pp. 143-162, one plate.

Reviews the discussion of the proper classification of *Xeusina agassizi* described by Goës 1892 as a foraminifer and by Haeckel in 1899 as a horny sponge under the name of *Stannophyllum zonarium*. Considers it as belonging to a peculiar group of Rhizopoda, which the author has called "Xenophyophora" and which contains two families, eight genera, and 22 species.

The Albatross 1904-5 collection yielded five species, which are described; tables and a chart showing distribution of the group are also given.

STILES, C. W. The occurrence of a proliferating cestode larva (*Sparganum proliferum*) in man in Florida.

Bull. 40, Hygienic Laboratory, U. S. P. H. and M. H. S., May, 1908, pp. 7-18, figs. 1-18.

— A re-examination of the type specimen of *Filaria restiformis* Leidy, 1880 = *Agamomermis restiformis*.

Bull. 40, Hygienic Laboratory, U. S. P. H. and M. H. S., May, 1908, pp. 19-22, figs. 19-26.

— The common tick (*Dermacentor andersoni*) of the Bitter Root Valley.

Public Health Report, U. S. P. H. and M. H. S., xxiii, No. 27, July 3, 1908, p. 949.

— and GOLDBERGER, JOSEPH. Observations on two new parasitic trematode worms: *Homalogaster philippinensis* n. sp., *Agamodistomum nanus* n. sp.

Bull. 40, Hygienic Laboratory, U. S. P. H. and M. H. S., May 25, 1908, pp. 23-33, figs. 27-66.

— A re-examination of the original specimen of *Taenia saginata abietina* (Weinland, 1858).

Bull. 40, Hygienic Laboratory, U. S. P. H. and M. H. S., May 25, 1908, pp. 35-38.

STILES, C. W., and HASSALL, A. Index-catalogue of medical and veterinary zoology. Subjects: Trematoda and trematode diseases.

Bull. 37, Hygienic Laboratory, U. S. P. H. and M. H. S., June 1908, pp. 1-398.

VAUGHAN, T. WAYLAND. Recent Madreporaria of the Hawaiian Islands and Laysan by T. Wayland Vaughan Custodian of the Madreporarian Corals, U. S. National Museum Geologist, U. S. Geological Survey [seal] Washington Government Printing Office 1907.

VAUGHAN, T. WAYLAND—Continued.

Bull. U. S. Nat. Mus., No. 59, July 12, 1907, pp. 1-ix, 1-427, pls. 1-xcvi.

The writer presents some general considerations on the species problem of corals, and the need of experimental investigation and more elaborate studies of variation. Lists are given of the families and genera of Madreporaria, of the Hawaiian species, their geographic and bathymetric distribution, and distribution according to temperature. In the systematic discussion of the fauna are described 79 new species, varieties, forms, and subforms.

BOTANY.

ATWOOD, ALICE CABY. (For notice of catalogue of botanical library of John Donnell Smith, see under Bibliography.)

BRITTON, N. L. and ROSE, J. N. A preliminary treatment of the Opuntioideae of North America.

Smithsonian Misc. Colls., L, Quar. issue, Pt. 4, No. 1786, Feb. 20, 1908, pp. 503-539.

——— Peresklopsis, a new genus of Cactaceae.

Smithsonian Misc. Colls., L, Quar. issue, Pt. 3, No. 1775, Oct. 28, 1907, pp. 331-333, pls. XLIII-XLIV.

CLARK, C. B. The Cyperaceae of Costa Rica.

Contr. U. S. Nat. Herb., x, Pt. 6, January 24, 1908, pp. 1-vii, 443-471.

HITCHCOCK, A. S. Types of American grasses.

Contr. U. S. Nat. Herb., xii, Pt. 3, June 18, 1908, pp. 1-v, 113-158, 1-v.

A study of the American species of grasses described by Linnaeus, Gronovius, Sloane, Swartz, and Michaux.

JOHNSTON, J. R. A collection of plants from the vicinity of La Gualra, Venezuela.

Contr. U. S. Nat. Herb., xii, Pt. 2, May 20, 1908, pp. 1-vii, 109-111.

MANN, ALBERT. (Assisted in the bibliography and citations by P. L. Ricker.) Report on the Diatoms of the

MANN, ALBERT—Continued.

Albatross voyages in the Pacific Ocean, 1888-1904.

Contr. U. S. Nat. Herb., x, Pt. 5, July 11, 1907, pp. 1-viii, 221-442, pls. XLIV-LIV.

MAXON, WILLIAM R. Studies of tropical American ferns, No. 1.

Contr. U. S. Nat. Herb., x, Pt. 7, Mar. 30, 1908, pp. 1-viii, 473-508, pls. LV-LVI.

——— and UNDERWOOD, LUCIEN M. Two new ferns of the genus Linden.

Smithsonian Misc. Colls., L, Quar. issue, Pt. 3, No. 1776, Oct. 28, 1907, pp. 335, 336.

PITTIER DE FÁBREGA, H. The Lecythidaceae of Costa Rica.

Contr. U. S. Nat. Herb., xii, Pt. 2, May 20, 1908, pp. 1-vii, 95-101, pls. 1-vii, figs. 1-4.

——— Tonduzia, a new genus of Apocynaceae from Central America.

Contr. U. S. Nat. Herb., xii, Pt. 2, May 20, 1908, pp. 1-vii, 103, 104, pl. ix, figs. 5, 6.

RICKER, P. L. (See under Albert Mann.)

ROSE, J. N. Nopalea guatemalensis, a new cactus from Guatemala.

Smithsonian Misc. Colls., L, Quar. issue, Pt. 3, No. 1774, Oct. 28, 1907, p. 330, pls. XLI-XLII.

——— (See also under N. L. Britton.)

SMITH, JOHN D., Catalogue of botanical library of. (See under Bibliography.)

UNDERWOOD, LUCIEN M. (See under William R. Maxon.)

WIGHT, E. F. A new larch from Alaska.

Smithsonian Misc. Colls., L.
Quar. issue, Pt. 2, No. 1728,
July 10, 1907, p. 174, pl.
xvii.

GEOLOGY AND MINERALOGY.

BASSLER, RAY S. Cement and cement materials.

Mineral Resources of Virginia,
1907, pp. 86-167, pls. xi-xx.

This paper deals with the general geology, geography, and stratigraphy of western Virginia, the economic value of the various cement horizons and distribution of cement materials. Details of localities, analyses, maps, and a number of illustrations accompany the report.

HOWELL, EDWIN E. (with WIRT TASSIN). The Williamstown meteorite. *Amer. Jour. Sci.*, 4th ser., xxv, No. 145, Jan., 1908, pp. 49, 50, 1 fig.

Mr. Howell gives the circumstances of the finding of the iron, its weight and general appearance, stating that it is a thin, flat, rectangular mass weighing about 31 kg., and was found in 1892, near Williamstown, Grant County, Ky. Mr. Tassin describes the iron metallographically as a typical octahedrite of medium coarseness. Bands of kamacite, taenite, and plessite are visible on the etched surfaces, with occasional nodules of troilite, some of which contain carbonaceous matter and are surrounded by a skin of schreibersite. His analysis is as follows:

Fe, 91.54; Ni, 7.26; Co, 0.52; Cu, 0.03; Cr, 0.05; P, 0.12; S, 0.17; C, 0.004; Si, trace; total, 99.604.

—The Ainsworth meteorite.

Am. Jour. Sci., 4th ser., xxv, No. 146, Feb., 1908, pp. 105-107, figs. 1, 2.

Mr. Howell gives the weight of the mass as 10.65 kg., with a density of 7.85, and states that it was found in 1907 about 6 miles northwest of Ainsworth, Brown County, Nebr. Mr. Tassin describes the meteorite as being triangular in outline and having a well-marked octahedral fracture on one edge; in fact, the three edges of the section studied approximate three directions of an octahedron, with the cut surface forming a fourth. In structure the iron is unique, the etched surface

HOWELL, EDWIN E.—Continued.

showing octahedral lamellae of the largest size, in which appear very minute areas which also possess a well-defined lamellar structure and show the three characteristic alloys. Troilite occurs in irregularly shaped segregations, which contain more or less carbon, with grains of nickel, iron, and phosphide of iron, and as a whole surrounded by a thin skin of schreibersite. Rhabdite is abundantly present. The analysis gives: Fe, 92.22; Ni, 6.49; Co, 0.42; Cu, 0.01; P, 0.28; S, 0.07; Cr, 0.01; Si, 0.040; C, 0.09; Sp. gr., 7.85.

MERRILL, GEORGE P. The meteor crater of Canyon Diablo, Ariz.; its history, origin, and associated meteoric irons.

Smithsonian Misc. Colls., L.
Quar. issue, Pt. 4, No. 1783,
Jan. 27, 1908, pp. 461-498,
pls. LXI-LXXV, figs. 124-129.

The character of the work is fully indicated by the title. The paper is the result of studies made on the crater under the auspices of the Smithsonian Institution in May, 1907.

—and TASSIN, WIRT. Contributions to the study of the Canyon Diablo meteorites.

Smithsonian Misc. Colls., L.
Quar. issue, Pt. 2, No. 1731,
Sept. 12, 1907, pp. 203-215,
pls. xviii-xxi, figs. 48, 49.

Doctor Merrill first discusses at length the "shale balls" and iron shale distributed about the crater of Coon Butte, Ariz., from the view point of their bearing on its origin. The shale balls and iron shale are held to have been derived from the same mass. This iron shows certain differences from the typical iron of the Canyon Diablo meteorites. This difference is explained by the suggestion that the original meteoric mass was very heterogeneous in character, with segregation masses rich in chlorides, phosphides, etc., which might easily have separated along their lines of contact from the more homogeneous portions and have from their very nature

MERRILL, GEORGE P.—Continued.

undergone more extensive chemical decompositions.

Mr. Tassin gives analyses of the shale-ball irons, the oxidized portions of such a ball, and compares them with earlier analyses of the typical Canyon Diablo iron and of oxidized shale balls. Finding little or no ferrous oxide, he regards the shale as composed essentially of limonite with some turgite, and that its magnetic property is, in part at least, due to unaltered schreibersite visible in many sections. Analyses are also given of the mineral components of the iron-tuente, cohenite, schreibersite in two varieties, a black non-magnetic residue, and olivine.

TASSIN, WIRT. [Analysis of a new variety of sericite.] The Granites of Maine (by T. Nelson Dale).

Bull. U. S. Geol. Surv., No. 313, 1907, pp. 46, 47.

From a quartz vein at Boldwell Company's quarry, Cooks Mountain, Redbeach, Calais, Me. In fine scales when compacted resembles serpentine. Luster pearly. Color greenish-yellow. Hardness, 2.5. Density, 2.79. Composition: SiO_2 , 53.28; Al_2O_3 , 23.06; Fe_2O_3 , 0.10; FeO , 4.30; MgO , 4.09; Na_2O , 0.65; K_2O , 8.90; H_2O , 6.00.

(See also under Edwin E. Howell and George P. Merrill.)

PALEONTOLOGY.

ANDERSON, ROBERT. (See under Ralph Arnold.)

ARNOLD, RALPH. Geology and oil resources of the Summerland district, Santa Barbara County, Cal.

Bull. U. S. Geol. Surv., No. 321, 1907, pp. 1-93, pls. I-XVII, figs. 1-3.

The characteristic fossils of the district are here illustrated to aid in the identification of the oil horizons. A plate by Dr. R. S. Bassler, illustrating the bryozoa of the Fernando formation is included. The specimens illustrated are the property of the National Museum.

— New and characteristic species of fossil mollusks from the oil-bearing Tertiary formations of Santa Barbara County, Cal.

Smithsonian Misc. Colls., L, Quar. Issue, Pt. 4, No. 1781, Dec. 13, 1907, pp. 419-447, pls. L-LVIII.

Describes and figures the characteristic fossil mollusks from these formations. The species are all new, and the types with one exception are the property of the National Museum.

— and ANDERSON, ROBERT. Geology and oil resources of the Santa Maria oil district, Santa Barbara County, Cal.

Bull. U. S. Geol. Surv., No. 322, 1907, pp. 1-161, pls. I-XXVI.

Illustrates the characteristic fossils to aid in the determination of the horizon. The specimens illustrated are the property of the National Museum.

ARNOLD, RALPH. (See also under George Homans Eldridge.)

BASSLER, RAY S. (See under E. O. Ulrich.)

ELDRIDGE, GEORGE HOMANS, and ARNOLD, RALPH. The Santa Clara Valley, Puente Hills, and Los Angeles oil districts, Southern California.

Bull. U. S. Geol. Surv., No. 309, 1907, pp. 1-266, pls. I-XLI, figs. 1-17.

Figures many Museum specimens from these districts to aid in the identification of the various formations.

GIDLEY, JAMES WILLIAMS. Revision of the Miocene and Pliocene Equidae of North America.

Bull. Amer. Mus. Nat. Hist., XXIII, art. 35, Nov. 26, 1907, pp. 865-934.

A revision of the genera and species, and a rearrangement and reidentification of the subfamilies, or groups, of the Equidae have here been made, and several new species are described.

GILMORE, CHARLES W. Smithsonian explorations in Alaska in 1907 in search of Pleistocene fossil vertebrates.

Smithsonian Misc. Colls., LI, No. 1807, May 27, 1908, pp. 3-38, pls. I-XIII, figs. 1-4.

Describes the results of the second expedition sent to Alaska in search of fossil vertebrates under the auspices of the Smithsonian Institution, followed by a brief review of the Pleistocene fauna of that region.

HATCHER, JOHN BELL. The Ceratopsia. Based on preliminary studies by Othniel C. Marsh, edited and completed by Richard S. Lull.

Monogr. U. S. Geol. Surv., XLIX, 1907, pp. 1-xxx, 1-300, pls. 1-LI, figs. 1-125.

The following types and pleistotypes from the collections of the National Museum are illustrated in this work: *Ceratops paucidens* (Marsh), *C. montanus* Marsh, *Diceratops hatcheri* Lull, *Triceratops alticornis* (Marsh), *T. calicornis* Marsh, *T. elatus* Marsh, *T. galus* Marsh, *T. obtusus* Marsh, *T. prorsus* Marsh, *T. serratus* Marsh, *T. sulcatus* Marsh.

HENDERSON, JUNIUS. New species of Cretaceous Invertebrates from northern Colorado.

Proc. U. S. Nat. Mus., XXXIV, No. 1611, June 16, 1908, pp. 259-264, pl. XIII.

Describes and figures five new species of Cretaceous Invertebrates. These types are the property of the National Museum.

MITCHELL, EVELYN GROESBEEK. An apparently new protoblatiid family from the Lower Cretaceous.

Smithsonian Misc. Colls., LII, Quar. issue, Pt. 1, No. 1798, May 27, 1908, pp. 85, 86, fig. 25.

Describes and figures a new genus and species of Cretaceous insect. The specimen is in the collections of the National Museum.

PARKS, WILLIAM ARTHUR. Niagara Stromatoporoids.

University of Toronto Studies, Geological Series, No. 5, 1908, pp. 175-240, pls. VII-XV.

Monographs the Stromatoporoids

PARKS, WILLIAM ARTHUR—Continued. of the Niagaran group. The majority of the types are the property of the National Museum.

RUEDEMANN, RUDOLPH. Graptolites of New York, Pt. 2.

New York State Museum, Mem. XI, 1908, pp. 1-583, pls. 1-31, figs. 1-482.

Many of the types covered by this monograph are the property of the National Museum.

ULRICH, E. O., and BASSLER, R. S. Report on the Cretaceous Bryozoa of New Jersey.

Geol. Surv. New Jersey, Pal., IV, 1907, pp. 313-356, pls. XX-XXVI.

Describes and illustrates the bryozoan fauna of the Cretaceous (Vincentown) marl, consisting of 55 species, 14 of which are new. The types are the property of the National Museum.

WALCOTT, CHARLES D. Nomenclature of some Cambrian Cordilleran formations.

Smithsonian Misc. Colls., LIII, No. 1804, Apr. 18, 1908, pp. 1-12.

Proposes names for the Cambrian formations of the House Range, Utah; Blacksmith Fork, Utah; and Mount Bosworth, British Columbia, sections.

—Cambrian trilobites.

Smithsonian Misc. Colls., LIII, No. 1805, Apr. 25, 1908, pp. 13-52, pls. I-VI.

Describes and illustrates a few of the more striking new trilobites occurring in the House Range, Utah; Mount Stephen, British Columbia; and Liberty Canyon, Idaho, sections. The types are the property of the National Museum.

BIOGRAPHY.

DALL, WILLIAM HEALEY. Henry Vedreys.

Nautilus, XXI, No. 9, Jan., 1908, p. 107.

An obituary notice of an old correspondent of the Smithsonian Institution.

MERRILL, GEORGE P. Carl Ludwig Rominger.

Smithsonian Misc. Colls., LII, Quar. issue, Pt. 1, No. 1796,

MERRILL, GEORGE P.—Continued.

May 1, 1908, pp. 79-82, fig. 23.

Contains a brief account of the life and work of the late State paleontologist of Michigan.

—Edward Travers Cox.

Smithsonian Misc. Colls., LII, Quar. issue, Pt. 1, No. 1797, May 1, 1908, pp. 83, 84, fig. 24.

Contains a brief account of his life and work. Mr. Cox was at one time State geologist of Indiana.

BIBLIOGRAPHY.

ATWOOD, ALICE CARY. Catalogue of the botanical library of John Donnell Smith presented in 1905 to the Smithsonian Institution.

Contr. U. S. Nat. Herb., xii,
Pt. 1, Apr. 23, 1908, pp. 1-III,
1-94.

BROCKETT, PAUL. Bibliography of published works of S. P. Langley, Secre-

BROCKETT, PAUL.—Continued.
tary of the Smithsonian Institution
1887-1906.

Smithsonian Misc. Colls. No.
1720, Aug. 1, 1907, pp. 35-49.

Printed in the account of the
memorial meeting held on December
3, 1906.





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